QUALITY OF LIFE OF SCHIZOPHRENIC OUTPATIENTS IN THE COMMUNITY

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ABSTRACT

The objectives of this study were to investigate the quality of life (QOL) of schizophrenic outpatients in the Hong Kong Chinese community and to examine the relationships between the perceived QOL and sociodemographic factors as well as clinical characteristics. Structured face-to-face interviews were conducted. Four instruments were used to collect data, which included Brief Psychiatric Rating Scale (BPRS), Hong Kong Chinese World Health Organization Quality of Life Scale-brief version (WHOQOL-BREF-HK), the Lehman Quality of Life Interview-short version (QOLI) and the demographic data sheet.

A total of 176 participants were recruited from a psychiatric outpatient department (OPD) in Hong Kong. 51% of them were males and 48.3% were females. Most of them were single, living with their family, unemployed, mentally stable at the time of the interview and not recipients of Community Psychiatric Nursing Service (CPNS) or attendants in day hospitals (DH).

Results showed that most participants were less contented with their life in general when compared with general population. The most prominent areas of dissatisfaction were physical and psychological health, economical situation, amount of money for leisure activities and the way in spending leisure time.

The female participants in this study did not differ from the males in objective life circumstances but they reported less satisfaction with living arrangement, chance of life enjoyment and relaxation, overall health and psychological health. Mental status was negatively and significantly related to QOL and the negative symptoms had a greater impact on QOL than positive symptoms. Results also indicated that the employed participants had better QOL than the unemployed. Stepwise regression analysis showed that participants' mental status and current employment status made significant contributions to predicting QOL.

Findings suggested further assistance was needed in these participants in the areas of interpersonal skills, social skills training, uses of leisure time constructively, employment and financial situation. There is a need to strengthen vocational rehabilitation so as to help our clients to enter into the workforce. Besides, community outreach services need to be expanded in providing close and continuous monitoring of clients' mental status and early intervention to minimize the risk of relapse and readmission.

Future study on QOL can include qualitative interviews in the assessment of QOL. It would give more in-depth information and findings.

摘錄

這個研究的目的是在調查居住在香港中國人社區的精神分裂症門診病人的生活素質，及檢定他們對於自己的生活素質的感覺和社會型態因素及臨床特徵之間的關係。這個研究運用結構式面談方式，並且利用四個工具指引以收集資料，它們是簡要精神病評估量表(BPRS)、香港世界衛生組織生活素質調查問卷-簡短版本 (WHOQOL-BREF-HK)、利文生活素質面談問卷-簡短的版本 (Lehman QOLI) 和社會型態資料問卷 (Demographic data sheet)。

總計有 176 個在香港一所精神科門診部覆診的病人參與這個研究。在他們中有 51%是男性和 48.3%是女性；他們大多數是單身、和他們的家人一起居住、失業、在這面談的時期精神狀況穩定的和沒有接受精神科社康護理服務或日間院治療。

研究發現大多數參與者大致而言較一般市民不滿於他們的生活素質，最明顯不滿的區域是他們的身體和精神健康、經濟狀況、用作閒暇活動的款額和利用他們的閒暇時間的方法。

參與這個研究中的女性與男性在客觀的生活情況沒有顯著不同，但是她們報告比較男性患者較不滿於居住環境、享受生活樂趣和放鬆的機會、整體健康和心理健康。參與者的精神狀況負性地和顯著地與生活素質有關，以及陰性的徵候較陽性的徵候對於生活素質有更大影響。結果亦指出那些被雇用的參與者

比失業的參與者有較好的生活素質。遂步回歸推論分析顯示這些參與者的精神狀況和當前的就業狀況，作爲預測參與者生活素質感覺的變數有着重要的貢獻。

研究建議這些參與者在人際關係的技巧、社交技巧、建設性地使用閒暇時間、就業和財務狀況等區域，需要更進一步援助。職業復康需要更進一步加強，以幫助精神病患者得以加入勞動市場。此外，社區外展服務需要擴充，以密切和連續地提供對病患者的精神狀況的監察和及早介入，以將病患者的復發和再次入院的危機減到最低限度。

將來在對於生活素質的研究可以利用或輔以性質上的面談方式來評估生活素質，這樣將會給與更多深入的資訊或發現。

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CHAPTER ONE

INTRODUCTION

With the deinstitutionalisation movement over the past three decades, the vast majority of clients with persistent mental illness were able to live in the community. However, there were concerns about whether these clients could access the full range of required community services to lead a satisfying life in the community. In addition, there was an increasing recognition that, apart from symptom reduction and relapse prevention, quality of life (QOL) has become an important health outcome indicator of health interventions. Many studies had been conducted to explore the QOL of the discharged mentally ill clients in order to gain better understanding of their current situation in the community. QOL studies had also gained popularity in health service research in which the usefulness of QOL in the planning, delivery and evaluation of mental health services were addressed.

This chapter will discuss the problems of deinstitutionalisation and issues related to clients with persistent mental illness. The background of QOL research for clients with mental illness will be introduced as well as the need and objectives of this study. The significance of the study will be discussed and an overview of the thesis will be presented.

Research problem

QOL is a multidimensional concept that encompasses the physical, social and psychological health of an individual (Browne, Roe, & Lane, 1996; Patterson, Kaplan, Grant, Semple, Moscona, Koch, Harris, & Jeste, 1996). QOL assessment provides a broader and more holistic view of life of clients that enables the health care professionals to have a clearer picture of clients' lives. In fact, the concept of QOL has rooted as early as 1948 when the World Health Organization (WHO) stated that "health is not merely the absence of disease and infirmity but also a state of physical, mental and social well-being" (WHOQOL Group, 1995, p.1403). This quotation reflected a broader sense of providing a holistic and comprehensive approach in service delivery as well as outcome evaluation in health care. It followed that the measurement of health and the effects of health care had to include not only an indication of changes in the frequency and severity of diseases, but also an estimation of well being of those who suffered from the diseases. Measuring the improvement in the QOL related to health care could assess this.

QOL is particularly relevant in health care provision nowadays. As a result of advancement in health care and medical technologies, it was possible for people to live a longer age (Harrison, Croudace, & Mason, 1996). Besides, the number of diseases, which ran a persistent and enduring course, was ever increasing. Many of these conditions were not completely curable and the best treatment for the sufferers was comfort rather than curing of the diseases. Therefore it was necessary for the health care providers to ask not only whether their treatments prolong lives or alleviate symptoms but also whether they enhance the QOL of those living with persistent illnesses (Baker

& Intagliata, 1982).

Awad (1997) opined that the increased interest in the QOL experienced by individuals with chronic, incurable, vastly debilitating disorders was due to rises in consumerism in recent decades. It resulted in higher demands from both clients and families for their rights for informed and the best treatment, more participatory approach to outcome measurement and health services researches. Consequently, a broader awareness of the clients' and families' point of view about their treatment and care had to be emphasized. Because others could not make judgement for the clients about the effectiveness of treatment and its beneficial or detrimental effects on their life quality, clients' perspectives in the evaluation of care should be included to assess benefits and inform resource allocation to what the clients thought as important (Jenkins, 1992). As a result, QOL was viewed as one of the clients' subjective indicators of quality of care.

In mental health care, QOL had also been regarded as an important focus by mental health professionals who had shifted their expectations from curing mentally ill clients to making them more comfortable in the community (Mercier, 1994; Oliver, Huxley, Bridges, & Mohamad, 1996). Lehman (1983) maintained that QOL indicators were useful in assessing needs, developing intervention strategies, and evaluating outcomes of interventions. Such an assessment enabled the care providers to have more understanding of their clients' problems through identification of areas in which the clients needed to develop support or strengths, and areas that were of most concern to the clients. Therefore, QOL assessment has been increasingly recognized as an important and valuable area of study for mental health service outcome (Baker & Intagliata, 1982; Baker, Jodrey, & Intagliata, 1992; Barry & Crosby, 1996; Lehman,

1983).

Many studies were conducted in the past decades by using QOL measures as tools to assess life circumstances and satisfaction of the consequences of persistent mental illness and the effects of long-term disability. Some of these earlier studies had gained information on the lives of the persistently mentally ill clients in the community. They had found that the persistently mentally ill clients were deprived in most aspects of their lives, especially in the housing conditions, family environment, social network, financial circumstances, safety and practical skills (Browne et al., 1996; Lehman, Ward, & Linn, 1982). These problems might be more profound for those suffered from a long-term mental illness such as schizophrenia. Literature indicated that these clients could be assisted in the identified problematic areas in order to lead a better life in the community (Lehman et al., 1982; Oliver et al., 1996; Skantze, 1998). It was apparent that an understanding of the QOL would be beneficial to the planning of care that was more appropriate and essential for the clients' needs. It was therefore possible and imperative to measure the QOL of these clients with persistent mental illness who were living in the community in order to develop appropriate community services for them to enhance their QOL.

As early as the 1960s, Hong Kong has committed to a shift from custodial care to community care in line with deinstitutionalisation movement (Yip, Cheung, & Pang, 1996). Also, with improved pharmacology, it was believe that the majority of the mentally ill could be treated or cared for in community settings. Recently, there was plan to further reduce the number of beds in psychiatric hospitals and expand the community services in Hong Kong (Hospital Authority, Hong Kong 1998). From the Government's

statistics, it was estimated that more than 880,000 people suffered from some forms of mental disorders in Hong Kong (Hong Kong Government, 1995). There was a total of 400,198 attendants in the specialist psychiatric outpatient clinics in Hong Kong as shown in the Hospital Authority Statistical Report in 1999. These figures reflected a great demand of service provision in the community in order to maximize the potential for community living for the mentally ill clients.

At present, there were about 80% of the total mentally ill population in Hong Kong had the diagnosis of schizophrenia (Chan, Mackenzie, Chan, Ku, & Leung, 1999). A majority of these schizophrenic clients suffered from enduring illness, frequent relapse and persistent symptoms despite lifetime drug treatment. Their daily functioning was also grossly impaired. These problems could be more serious in those schizophrenic clients with persistent illness, who needed intensive attention and services in leading a satisfying life. These clients needed effective community-based services in order to reintegrate into the community more successfully. It raised concerns about whether a full range of community services was available in meeting the demand of such a large number of mentally ill clients, especially those schizophrenic clients with persistent illness in the community. There also existed questions about whether community services or resources could adequately and appropriately support them to sustain a satisfactory life in the community.

Yip (1996) reviewed the development of mental health services in Hong Kong and commented that community mental health services were not in pace with the deinstitutionalisation movement. Many mentally ill clients could not receive adequate individual attention and care after discharged from the hospitals. The consequence to

community care was to leave these discharged mentally ill clients segregated, isolated, encountered strong rejection and intensive public stigmatization in the community (Yip, 1996). As a result, readmission was frequent and these clients might have a poor QOL.

Mak (1992) also opined that the high readmission rate of the mentally ill clients was due to the inaccessibility and inadequate coordination of service components. Those clients with persistent mental illness might have greater difficulties in adjusting to the community living due to the detrimental effects of their illness, they might encounter even more problems in the community. It raised the question of whether deinstitutionalisation really helped to improve the life situation and satisfaction of these mentally ill clients in the community. There were also questions regarding what kind of lives the persistently mentally ill clients would have in the community after discharge from psychiatric hospitals and what types of services would be in greater need for them. These questions would remain unanswered if the real life situation from these clients' perspectives were not being acknowledged.

Numerous studies had been conducted in the past that aimed to learn more about the QOL of the clients with persistent mental illness. However, the results of them were not conclusive about how these clients perceived their QOL. Besides, most of the studies were carried out in western countries. The results of these studies might not be applicable to Hong Kong settings. Therefore, it was imperative to conduct a study about the QOL of the clients in the Hong Kong community. As the majority of the mentally ill clients in the community were clients diagnosed with schizophrenia with persistent illness, therefore this study aimed to target at this group of clients.

Purpose of the study

The purpose of the study was to develop a profile of the QOL for persistently mentally ill clients with a diagnosis of schizophrenia, who resided in the community in Hong Kong. The recognition of the QOL issue and assessment of their QOL was a beginning step to understand the life conditions of these clients. Thereby, appropriate nursing interventions could be planned and provided to enhance their lives.

The objectives of the study were:

1. To examine the perceived QOL of schizophrenic clients with persistent illness in the Hong Kong community by means of the Lehman QOLI and the WHOQOL-BREF-HK scale

2. To elucidate the relationships among sociodemographic factors, clinical characteristics and QOL.

3. To determine the independent influence of predictors of demographic factors (gender, age, employment status), clinical characteristics (years of onset of illness, number of previous psychiatric hospitalizations, mental status, positive and negative symptoms as assessed by the BPRS and the utilization of CPNS) on QOL.

Hypothesis

1. The independent variable of age would be significant predicator of the dependent variable: level of QOL

2. The independent variable of gender would be significant predicator of the dependent variable: level of QOL

3. The independent variable of employment status would be significant predicator of the dependent variable: level of QOL

4. The independent variable of years of onset of illness would be significant predicator of the dependent variable: level of QOL

5. The independent variable of number of previous psychiatric hospitalizations would be significant predicator of the dependent variable: level of QOL

6. The independent variable of mental state as assessed by the total BPRS score would be significant predicator of the dependent variable: level of QOL

7. The independent variable of positive symptoms as assessed by the total score of BPRS in items of conceptual disorganization, hallucinatory behaviour and unusual thought content would be significant predicator of the dependent variable: level of QOL

8. The independent variable of negative symptoms as assessed by the total score of BPRS in items of emotional withdrawal, motor retardation and blunted affect would be significant predicator of the dependent variable: level of QOL

9. The independent variable of utilization of CPNS would be significant predicator of the dependent variable: level of QOL

Operational definitions

Quality of Life (QOL) QOL is an individual's perception on his/her life circumstances (WHOQOL Group, 1995). It includes subjective judgement of his/her current life satisfaction in multiple life domains, including living condition, daily activity and functioning, family relationships, social relationships, finances, work, personal safety, health, and objective indicators in the same domains such as living arrangement, amount of leisure and daily activities, frequency of family and social contacts, income and expenditure, employment status, contact with legal issues and crimes (Lehman, 1983).

Persistent Schizophrenia: One who has been diagnosed schizophrenia by the attending psychiatrist according to criteria of the Diagnostic Statistical Manual IV and who has the illness for at least 2 years (Goldman, Gattozzi, & Taube, 1981).

Significance of the study

The concept of QOL is important in the care of schizophrenic clients with persistent illnesses. These clients encountered a broad spectrum of difficulties that were resulted from the profound influence of their illness. Even those that were less severe, their persistent illness had long-term effects on them despite extended periods of symptom remission (Hirsch & Barnes, 1995). Examples of the effects were stigmatization, functional impairment in activities of daily living, such as personal hygiene and self-care, self-direction, interpersonal relationships and social interactions (Goldman et al., 1981). Other identified examples of QOL problems in clients with persistent mental illness were social isolation, stigmatization, unemployment and poverty (Aviram, 1990; Lehman, 1983). Because these sufferings could not be quantified and the disease was unlikely to be totally cured, intangible benefits such as preventing relapse, relieving distress, reducing impairment resulted from the illness and improving QOL were important in caring for this group of clients (Lehman, 1983). More information about their perceptions of their lives could facilitate decisions in treatment priorities and designing appropriate care to these clients. Lehman et al (1982) supported that a broad awareness of clients' life conditions could assist greatly in understanding the impact of illness and health care on their general well-being, as well as clarify what interventions, whether medical or otherwise, might improve their QOL.

There has been an increasing use of QOL as a tool for outcome measures in clinical trials and health care research (Spilker, 1996; Oliver et al., 1996). QOL could be useful as an indicator in evaluating the effectiveness of services or interventions. To fully evaluate the effectiveness of care, its broad effects on all life domains had to be taken

into account. Effectiveness of care should be measured from not only health professionals' perspective, but also from the clients as well. For example, although conventional neuroleptics were effective in treating schizophrenia, those extrapyramidal side-effects were often distressing, socially visible and stigmatizing (Davidhizar, 1985; Katschnig, Freeman, & Sartorius, 1997). Even worse, the symptoms of mental illness still persisted despite life-long drug treatment. It might affect the QOL of the clients. Therefore, the use of QOL measures could be an alternative for evaluation of care, rather than solely relied on the traditional measures such as symptoms reduction as outcome variable (Katschnig et al., 1997). Although it was important to know whether a clinically significant reduction in symptoms had occurred, it was also important to determine whether the clients' QOL had improved.

This study incorporated clients' perspectives into the evaluation process. Given the change in treatment modality that advocated community care, it was believed that QOL of these clients with persistent mental illness, particularly the schizophrenics in the community, would be improved (Hospital Authority, Hong Kong, 1998). However, there was only one local study on QOL of mentally ill clients in Hong Kong. Little was known about the perception of life circumstances and satisfaction with lives of these clients who lived in the Hong Kong community. There existed a gap in knowledge of QOL of these clients and the impact of deinstitutionalisation on the their lives. An examination of the QOL of these clients who resided in the community was imperative in order to fill this gap. The results of this study could help health care professionals improve rehabilitation strategies for these clients so that QOL of these clients could be enhanced.

Some authors asserted that life satisfaction was related mainly to the disparity between subjective reference standard for life and his or her objective situation. They believed that needs and QOL were inextricably intertwined (Rosenfield, 1992; Mercier & King, 1994). Therefore, QOL assessment, which produced a broad overview of people's situation, was one of the possible ways of identifying their needs. In additional, by raising the QOL issues of the persistently mentally clients in the community, health care professionals could be more aware of the diversity of needs among these clients. It helped them to decide what resources are needed to improve these clients' QOL. They could utilize the findings from QOL studies to develop and provide specifically tailored interventions to meet the special perceived needs of this particular group of clients. This information could also be beneficial for Community Psychiatric Nurses (CPNs) and psychiatric nurses in the day hospitals (DH), who were often the major support for maintaining the clients in the community. CPNs actively approach and contact clients in the community. They render comprehensive care including ongoing support, information, and individualized therapeutic and rehabilitative strategies to decrease relapse and readmission rates of the clients. DH provides a wide range of intensive skills training and rehabilitation programmes for the discharged clients. Ultimately, the clients can be well maintained in the community and their QOL will be enhanced.

In addition to the understanding of the concept of QOL, an understanding of the factors that might affect QOL of these persistently mentally ill clients was necessary. It was supported by the literature that sociodemographic variables (Browne et al., 1996; Lehman, 1983; Shtasel, Gur, Gallacher, Heimberg, & Gur, 1992), clinical factors (Skantze, Malm, Dencker, May, & Corrigan, 1992; Sullivan, Wells, & Leake, 1991) and

service utilization pattern (Hachey & Mercier, 1993; Halford, Schweitzer, & Varghese, 1991; Huxley & Warner, 1992) affected QOL of clients with schizophrenia who lived in the community. These factors were examined in this study. It might be possible to manipulate the modifiable variable such as financial situation, employment status, and mental status that might alter their QOL.

Deinstitutionalisation will be more successful if these clients have a life in the community with dignity and quality. This study helps to inform the current health care practice in terms of resource allocation and policy development in the care of clients with persistent mental illness in the community.

Overview of the thesis

Chapter one provided the background for this study, explored the problems of mentally ill clients who resided in the community, outlined the purpose and objectives of this study and discussed the significance of this study. Chapter two reviews the literature on studies that are relevant to this study, including those addressing the concept and importance of QOL in mentally ill clients. A conceptual framework for this study is developed. Chapter three presents the methodology of this study, which includes the pilot study and ethical considerations. It also describes the statistical methods used to analyze data. Findings of this study are presented in Chapter four. Chapter five reviews and discusses the major findings with support from previous research and literature. The final chapter presents conclusions and implications derived from this study. Limitations of this study are examined and recommendations for future research are suggested.

CHAPTER TWO

LITERATURE REVIEW

Introduction

A literature review was conducted using the MEDLINE and CINAHL databases from the years 1980 to 2000. The computer search on the databases was performed, using the key words "quality of life" and “schizophrenia”. An initial search yielded some hundreds of published articles. Therefore, those publications that addressed QOL issues among chronic schizophrenic clients or schizophrenic clients with persistent illness in the community, were included. Researches on sociodemographic and clinical factors affecting QOL of these clients in the community were identified. More specifically, studies related to clients who were inpatients and that examined other factors that had an impact on QOL but were out of the scope of this study, were excluded. There were about one hundred articles identified as relevant to this study. These relevant literatures were reviewed and summarized as follows. This chapter will start with a discussion on the definition and measurement of QOL. Studies on QOL and factors affecting the QOL of mentally ill clients will be reviewed and summarized. Lastly, the conceptual framework of this study will be constructed.

Definition of QOL

Although it is vital to conceptualize and measure QOL to help determine health care policy, evaluation of care as well as clinical decision making, there is no universal definition of QOL. The concept of QOL remained elusive throughout the literature (Harrison, Juniper, & Mitchell-DiCenso, 1996). A review by Gill and Feinstein (1994) on how well QOL was being measured in the medical literature found 570 articles referenced under "quality of life" during the past 20 years. They randomly selected 75 articles and found that only 15% of them conceptually defined QOL. Different researchers gave different definitions that were largely depended on the purposes and situation in defining this concept.

For example, Oleson, Heading, Shadick, and Bistodeau (1994) analyzed the concept of subjectively perceived QOL to determine its critical attributes, antecedents and consequences in order to establish a basis for an operational definition for use in research. The antecedents identified were life and a state of consciousness. The consequences of QOL were satisfaction, happiness and a state of well-being. QOL was defined as a cognitive experience manifested by satisfaction with life domains of importance to the individual and an affective experience manifested by happiness with important life domains (Oleson et al, 1994).

Ferrans and Power (1985) defined QOL as,

"the person's sense of well-being that stems from satisfaction with the areas of life that are important to him/her" (p.5).

The uniqueness in their definition was the personal emphasis on areas of life. They focused on the person's perceived meaning of life.

The World Health Organization (WHOQOL Group, 1995) defined QOL as,

"an individual's perceptions of their position in life in the context of culture and value systems in which they lived and in relation to their goals, expectations, standards and concerns" (p.1403).

The WHO definition provides a holistic view about QOL, which is viewed as a broad-ranging concept affected in a complex way by the individuals' physical health, psychological state, level of independence, social relationships and their relationship to salient features of their environment (The WHOQOL Group, 1995). The unique characteristic of this definition is that it takes into account of the primacy of subjective perceptions and the role of the contextual factors that includes environmental, social domains such as physical safety, financial resources and social support, which may influence one's QOL. This definition has added weight to the subjective view of QOL.

In the study conducted by Lehman (1983), QOL was defined as a subjective sense of well-being. Again, the emphasis was on the individual's subjective perception of life. The difference between the WHOQOL and the Lehman QOL model was that the latter attempted to measure QOL from an objective perspective as well as recognizing the effects of an individual's unique subjective life experiences and feelings on his/her QOL. Lehman (1983) maintained that the objective perspective represented a functional view of QOL including physical, mental and social functioning. Therefore, those issues as

housing, physical environment, recreation, income and employment would play a part in determining one's QOL. This information might provide some indication of the individual's life condition and had to be taken into consideration. However, different individual had different views, values and meanings of his/her own QOL. Therefore, an individual's subjective experience of their QOL was also important. He further reiterated that how people viewed their lives would be related to their personal experiences, cognitive evaluation based on comparison, expectation and aspiration in day-to-day living. Although not exhaustive, these could be influenced by individual's characteristics, social situation, culture and environment. Therefore, different clients could have different perceptions of QOL though they had the same diagnosis of disease. The following figure illustrated Lehman's Quality of Life Model (Figure 1).

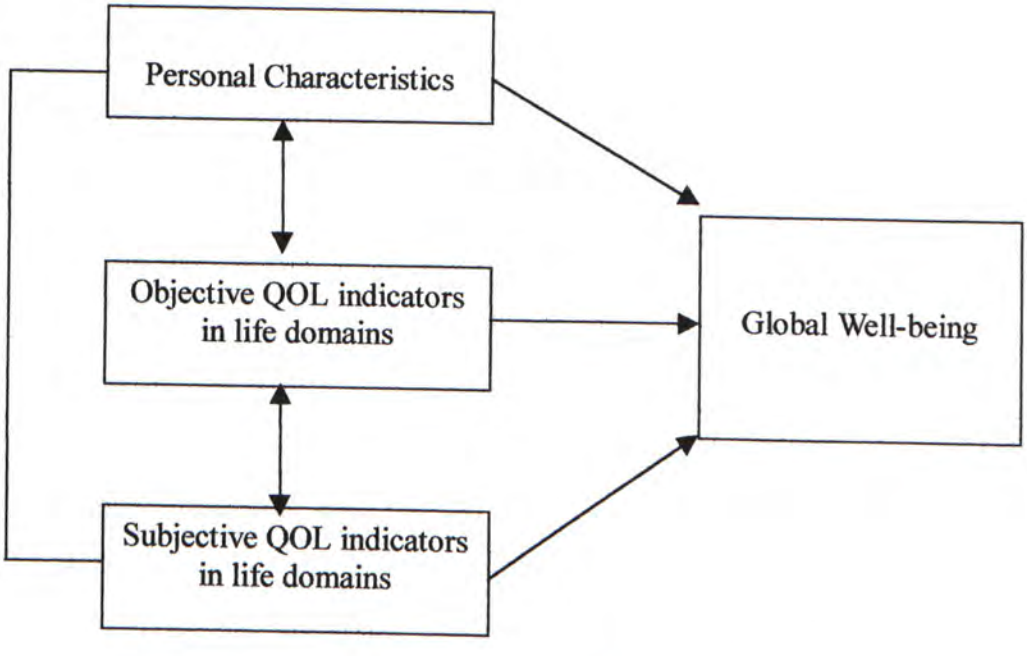

Figure 1: Lehman's Quality of Life Model

Though there is no consistent definition for QOL, it has been commonly acknowledged that QOL is not an all or nothing concept but is a continuum. Besides, it was viewed as a multi-faceted construct that a core set of domains or dimensions had to be covered (Browne et al., 1996; Harrison et al., 1996). It encompassed health-related factors such as physical, functional, emotional and mental well-being, as well as non-health-related elements such as jobs, family, friends and other life circumstances.

In this study, QOL was seen as a multi-dimensional concept that encompassed various life domains with both subjective and objective indicators. These life domains included living condition, daily activity and functioning, family relationships, social relationships, finances, work, personal safety and health.

Measurement of QOL

Apart from the debate on the definitions of QOL, there were also arguments on how QOL should be measured (Bowling, 1991; Lehman, 1988). Despite numerous literatures on the QOL measurement, no unified approach has been found (Becker, 1995; Simmons, 1994). A number of instruments for measuring QOL had been developed during the last 20 years, which were based primarily on two main arguments. The first argument was whether QOL was a subjective or objective concept and the second was whether a generic or disease-specific measure should be used to measure it.

The use of objective and subjective QOL measurement

Objective indicators of QOL assessment included factual data, e.g. types of accommodation, occupation, income (Goodison & Singleton, 1989). In this objective approach, it was assumed that health, physical environment, income, housing, and other observable and quantifiable indicators were valid measures of QOL and there were absolute standards for comparison when assessing these variables. Life quality in the context of health care could be determined by comparisons of objective indicators to established standards. Examples of objective QOL measures included the Global Assessment Scale (Sainfort, Becker, & Diamond, 1966) and the physical function status as evaluated by means of the Katz Activities of Daily Living Scale (ADL) (Katz, Downs, Cash, & Grotz, 1970).

These objective measures of QOL were important because they provided an established standard that could be compared across studies and populations and from which deviations from the standard could be evaluated. However, assessing QOL on the basis of utilizing objective indicators alone was problematic. Holmes (1989) maintained that those who used objective measures alone might only project their own values and priorities of care. In this sense, the health care professionals used their own criteria to judge the effectiveness of what they provided for the clients but clients' perception on their own lives was not being taken into account (Gill & Feinstein, 1994). Individuals might have widely varying personal beliefs, values, goals and needs in their lives (Zautra & Goodhart, 1979). As such, objective indicators might not reflect the true benefits or gains from the services as experienced by the clients.

Orley, Saxena, and Herrman (1998) suggested that QOL was a subjective experience influenced by an individual's earlier experiences, mental state, personality and expectations. Objective indicators could only represent life conditions that might influence one's QOL but they were not measures of the actual experience. Study of Campbell had illustrated this phenomenon. He found that older Blacks in the United States reported a higher level of happiness than older Whites did, despite their inferior objective living conditions (Campbell, 1976). Other studies also found that objective assessments made by clinicians had correlated poorly with clients' subjective ratings of their life quality, and were believed to be inaccurate reflections of clients' well-being. Some authors maintained that the weighting and priority attached to any life area in an objective assessment instrument was only arbitrary without an understanding of the values and beliefs of a population and of how those feelings and concerns were manifested in a particular individual (Voruganti, Heslegrave, Awad, & Seeman, 1998).

As a result, the individual's subjective perception of life such as ratings of happiness, well-being and life satisfaction, had been increasingly recognized as key components of QOL in the last decade (Aaronson, 1991; Browne et al, 1996; Spilker, 1996; Orley, et al. 1998; Van Praag, 1992). Many researchers now used subjective measures of QOL that allowed the inclusion of client's implicit personal values in their QOL assessment.

Subjective QOL could be measured by asking clients to rate their perception of their life conditions and experiences. It could be done unidimensionally by asking the person to rate on a global scale of e.g. 1 to 10. However, this revealed only very little information about their QOL. Therefore, information gained from multidimensional

scales that consisted of various domains and factors would be more meaningful. The WHOQOL Scale was an example of subjective multidimensional well-being scale (WHOQOL group, 1998).

Nevertheless, the reliance on solely subjective approach also had disadvantages. If QOL was evaluated only on the basis of subjective life satisfaction, the conclusion reached might be questionable. For example, a disabled man who was unable to walk would score low on ADL due to his objective disability, but his level of subjective satisfaction might be average. It was because he might have adjusted to his disability and lowered his expectations, such as reducing his value of needs or compared his present life with that of other people with poorer QOL. Obviously, one could not conclude that the QOL of the disabled was higher than that of persons without a disability based only on their level of happiness.

Sometimes, a correlation between objective and subjective indicators of QOL was used to validate clients' self-reports (Atkinson, Zibin, & Chuang, 1997). That meant, if an individual reported frequent social contacts with several close friends, then that person should also likely to report satisfaction with the relationship network. However, studies demonstrated different results. It was found that the persistently mentally ill clients sometimes reported unexpectedly high subjective appraisals of life satisfaction, even though their objective indicators of QOL were quite low (Atkinson et al., 1997; Barry & Crosby, 1996). Atkinson et al. (1997) found that compared to depressed and bipolar control group, the schizophrenic group consistently reported more negative life events but greater life satisfaction than the other groups. Similarly, Barry and Crosby (1996) found high levels of satisfaction despite poor objective indicators of QOL.

It led to the concern about the reliability of using subjective indicators alone in measuring QOL in individuals with severe mental illness (Awad, 1997). Some authors commented that clients' perception could be influenced by their persistent psychotic symptoms and questioned the reliability of clients' self-reports on their QOL (Browne et al., 1996; Lehman, Postrado, & Rachuba, 1993). However, some studies had demonstrated good validity and reliability of self-reports of QOL in clinically stable, moderately ill schizophrenic clients (Lehman et al., 1993; Voruganti et al., 1998). Some studies supported that schizophrenic clients were able to assess adequately their own social adjustment (Glazer, Aaronson, Prussoff, & Williams, 1980), to express their feelings and attitudes reliably towards aspects of treatment (McGlashan & Carpenter, 1981), hospital placement (Binder & McCoy, 1983), as well as the impact of treatment on their QOL (Davidhizar, 1985; Hogan, Awad, & Eastwood, 1983; Hogan & Awad, 1992).

Lehman et al (1982) in a study of 278 mentally ill board-and-care home residents with Lehman Quality of Life Interview (QOLI), found that subjective QOL was correlated with work, safety, and health status. However, Lehman found that the more abstract the domain, such as "need for autonomy" and "leisure activities", the less correlation there was between the objective and subjective indices of QOL. In realizing these problems, many QOL researchers pointed to the need for both objective and subjective indicators. Lehman's QOLI is an example of instruments that measure both objective and subjective QOL indicators.

In conclusion, studies had shown inconsistent findings between objective and subjective measures of QOL. Often, individuals living with poor objective circumstances reported unexpectedly high levels of satisfaction. In other studies, there were correlations between ratings of objective and subjective indicators but only for concrete domains, such as finances and work. Therefore, both objective indicators and subjective satisfaction had to be used as the conceptual approach in measuring QOL. This approach was used in this study.

Generic vs. Specific instruments

The QOL measurements were divided into two groups: generic instruments and disease-specific instruments. Generic measures aimed to investigate large number of domains that were integral to the assessment of QOL which were applicable to diverse groups of population, thereby permitted comparison of different impairments, illnesses, populations and various programmes or interventions. They were useful in policy analysis and decision making in allocating resources to different health interventions (Patrick, & Deyo, 1989). Well-known and widely used examples of generic scales included the Sickness Impact Profile (Bergner, Bobbitt, & Cater, 1981), the Quality of Well-being Scale (Becker, 1995) and the WHOQOL scale developed by WHO (WHOQOL Group, 1995).

A drawback of generic measures was that they were not always adequately focused on the specific problems of a particular client population (Katschnig et al., 1997). Consequently, many disease-specific QOL questionnaires had been developed. Disease-specific measures covered life domains that were most relevant to the disease and on the characteristics of clients in whom the condition was most prevalent (Patrick & Deyo, 1989). Such scales were more sensitive to the particular problems of a specific client population, thus were appropriate for clinical trials to evaluate specific therapeutic interventions.

For the schizophrenic clients with persistent illness, the problems of stigmatization, lack of social skills and social support, low self-esteem, family strain, unemployment and poverty were common (Lehman, Possidente, & Hawker, 1986; Mak, 1992). Therefore, QOL scales targeted towards schizophrenic clients needed to address these commonly encountered problems. An example of such scale is the Lehman's QOLI. It is one of the most widely used scales for the schizophrenics that has been designed to give attention to and to capture the specific burdens or concerns unique to mental illness. This instrument was chosen for use in the present study. This study had adopted the strategy of supplementing a generic measure (WHOQOL) so as to enable comparison across population, as well as a disease-specific measure (QOLI) so as to broaden the scope of disease related QOL dimensions. Ultimately better insight into the areas of interest could be gained.

Studies of QOL on mentally ill clients

Studies related to QOL of persistently mentally ill clients mainly focused on two aspects. The first was on descriptive studies that compared the QOL of clients with persistent mental illness to that of the general population. The second was on examining the impact of different variables on the QOL of these clients.

Some studies suggested that QOL among clients with persistent mental illness differed from that of the general population (Lehman et al., 1982; Simpson, Hyde, & Faragher, 1989; Sullivan et al., 1991). Persistently mentally ill clients tended to have lower QOL than the general population (Lehman et al., 1982; Lehman et al., 1986; Mercier, 1994; Rosenfield, 1992). A study in Los Angeles in the United States found that in the general population, 82-91% of adults reported that they are satisfied with their lives. In contrast, only 42-56% of schizophrenic clients with persistent illness reported that they were satisfied (Lehman et al., 1982).

In a bigger scale study conducted by Lehman and his colleagues in 1986, the mean general life satisfaction score of community residents with persistent schizophrenia in Los Angeles was 4.4, while the mean score for the national population was 5.5 (Lehman et al., 1986). Skantze et al (1992) found that 84% of the sample of schizophrenic outpatients' reported low QOL by using the Quality of Life Self-report (QLS-100). Browne et al (1996) also found poor-to-moderate QOL in a representative sample of schizophrenic clients attending a catchment area rehabilitation centre. On the other hand, some studies showed that clients had improved in QOL after discharged from hospitals (Pinkney, Gerber, & Lafave, 1991; Simpson et al., 1989; Solomon, 1992).

On the whole, many studies showed that clients with persistent mental illness, such as schizophrenia, experienced lower levels of life satisfaction than the general population. However, the clients who lived in the community reported better QOL than the hospitalized clients.

The satisfaction level in different areas of life for clients who suffered from persistent mental illness varied among studies. For example, Lehman et al. (1986) found that the sources of greatest dissatisfaction for clients in the community were poverty, unemployment, lack of community services, poor health, and problems with personal safety. Malm, May, and Dencker (1981) used the Quality of Life Checklist (QOLC), which is a 93-item semi-structured checklist, to describe the life quality of 40 schizophrenic outpatients. They noted unsatisfactory ratings for almost all clients in the domains of knowledge and education, relationships, finances and leisure. Other studies suggested that clients with persistent mental illness were least satisfied with the domains of finances and social relations, and most satisfied with safety and housing (Kemmler, Holzner, Neudorfer, Meise, & Hinterhuber, 1997). Skantze et al (1992) identified work and activities, inner experiences and mental health, contacts with others, and money as the most frequently reported unsatisfactory areas.

In addition to life satisfaction, there were also differences in objective QOL between the general public and clients with persistent mental illness. One of the most profound differences was in the rate of employment (Oliver et al., 1996). In a study comparing 422 clients with persistent mental illness with the general population of Lancashire, UK, 74.2% of males and 52% of females in the general population were employed, in contrast to 12.8% in the population of clients with persistent mental illness

(Oliver et al., 1996).

It was apparent that most of the studies on clients with persistent mental illness were mainly conducted in the Western countries. There were inconsistent findings in the satisfaction level in the areas of life of these clients. It might be due to different instruments used. However, finance, leisure and social relationships were commonly identified as dissatisfied areas of life. Furthermore, the problem of unemployment was common among clients with persistent mental illness. It was of interest to study whether there were similarities and differences in QOL of the clients with persistent mental illness in Hong Kong when compared with other parts of the world.

There was only one QOL study found in Hong Kong related to the QOL of mentally ill person, which was conducted by Cheung in 1996. The QOL of clients, mainly consisted of persistent schizophrenia (n=87), who lived in four supervised community settings was measured (Cheung, 1997). Results of the study revealed that the subjects demonstrated an above average satisfaction of QOL with mean score of 5.32 (SD 1.40) on a scale of 1 to 7. Results also showed that the subjects were mostly satisfied with living situation, (mean=5.66), safety (mean=5.6), health (mean=5.18), daily activities and functioning (mean=4.78), fairly satisfied with finance (mean=4.5), social relations (mean=4.34), and least satisfied with their work (mean=3.82) and family relations (mean=3.46). However, Cheung's (1997) study did not involve clients who resided with their families or lived alone. As it was the only one local study in Hong Kong on the QOL of persistently mentally clients, there was no other study available for comparison. The results of Cheung's study shared some similarities with findings of Western studies despite different instruments were used. The persistently mentally ill

clients in Hong Kong subjectively perceived their QOL as satisfactory, though commonly dissatisfied with work, finance, leisure and social relationships.

Reasons for the poor QOL that related to mentally ill clients in the community were explored in qualitative studies. Recurring themes of stigmatization, loss, suffering, and isolation were found (Bachrach, 1998; Perese, 1997; Davidson, Hoge, & Godleski, 1996). Perese (1997) maintained that clients with persistent mental illnesses had to struggle to meet their needs in communities that rejected them and where resources were scarce and services scattered. Bachrach (1998) maintained that the discharged mentally ill clients were still lonely, bored, intermittently psychotic and perhaps without a place to stay. He stated that there existed a variety of continuing critical, but largely unmet, treatment needs among these ex-patients. Moreover, Davidson et al. (1996) reported that although the discharged clients expressed an overall preference for living in the community, many indicated that their lives outside the hospital were stark, lonely and largely devoid of meaningful activity or contact. More specifically, these clients identified problems arising from enforced social isolation, loneliness, and the absence of group membership.

In Hong Kong, Yip (1996) reviewed the development of mental health services. He commented the formal community services had not been well developed to replace the institutional care. As a result, clients could not receive adequate individual attention and care. The mentally ill clients, after discharged from hospital, might be lonely and lack social acquaintances. It might greatly affect their QOL and hamper their successful reintegration into the community. Studies on QOL could help to identify problem areas so that interventions and services could be prioritized to facilitate these clients in

achieving a better QOL in the community. There existed a need to conduct local study on the QOL of these clients in order to gain better insight into the situation in Hong Kong.

Factors influencing QOL

With the aim of elucidating the factors that contributed to life satisfaction in individuals with schizophrenia, a number of cross-sectional studies have been conducted to investigate the relationships between various variables and measures of QOL. Studies mainly focused on demographic variables, symptom profiles and circumstances such as types of treatment, to determine how these factors might impact QOL. However, the findings related to the influence of demographic factors on QOL have been inconsistent.

Lehman (1983) found some demographic variables that correlated significantly with life satisfaction among a group of board-and-care mentally ill residents. Women, married and those less educated, were more satisfied with their lives as a whole (Lehman, 1983). Shtasel et al (1992), using Quality of Life Scale (QLS) on schizophrenic subjects, found that females had better QOL than males, and female showed better functioning in the social and engagement factors.

In a large investigation in Britain and Germany (n=617), comparisons of QOL were made between in-patients and community-residing individuals (Roder-Wanner, Oliver, & Priebe, 1997). Results revealed that females enjoyed superior work, financial and housing situations. They were more likely to be married and made better use of the

health care system than the males. The findings of superior "objective" psychosocial functioning in women in this investigation was also found in some studies in this area (Childers & Harding, 1992; Goldstein, 1988 Haas & Sweeney, 1992).

However, in another study conducted by Lehman, the female schizophrenic clients were less satisfied with their life than males (Lehman, Postrado, & Rachuba, 1995). Marshall, Burnam, Koegel, Sullivan, and Benjamin's (1996) study found that females reported poorer QOL, particularly with personal safety and living situation. Further examination of domain-specific influences on subjective satisfaction revealed additional sex differences. Specifically, for females, the most important predictor of life satisfaction was satisfaction with mental health. For males, life satisfaction was most strongly determined by their satisfaction with getting along with others. These findings, therefore, indicate that males and females schizophrenic clients had different evaluations of their QOL and different concerns.

Age was found to have no relationship with QOL in a sample of schizophrenic clients by using the QLS (Meltzer, Burnett, Bastani, & Ramirez, 1990). However, Browne et al (1996) found that age was negatively correlated with the total QLS score in a sample of schizophrenic outpatients. Similarly, Skantze et al (1992) reported that older clients had a significantly lower QOL. The relationship between age and QOL were inconclusive.

Studies were conducted to examine the relationship between clinical characteristics and QOL of schizophrenic clients. Browne et al. (1996) found that residents of hostels and group homes, who had more severe negative symptoms, a longer duration of illness and longer cumulative duration of hospitalization, had a poorer QOL by using QLS. Similarly, Meltzer et al (1990) found that the more the number of previous hospitalizations, the lower the QOL score in the same scale. It showed that the longer the illness duration or more hospitalization, the poorer the QOL. It highlighted that therapeutic intervention implemented early in the course of mental illness could be beneficial in preventing relapse and ultimately, improving clients' QOL.

Sullivan and colleagues (1991) investigated the relationships between QOL and severity-of-illness indicators (e.g., age of onset, number of hospitalizations, global functioning) and clinical variables that might be responsive to intervention (e.g., medication side effects, levels of symptoms, social functioning). They studied 101 subjects comprised of predominantly young men in the United States, who were persistently mentally ill but clinically stable. The study revealed that 44% of the variance in QOL was explained by demographic variable: level of income, and three clinical variables: depressive symptoms, degree of perceived family criticism, and medication side-effects (Sullivan et al., 1991). It suggested that QOL in schizophrenic clients might be realistically improved by interventions designed to address modifiable clinical factors.

With reference to psychopathology, particularly the negative symptoms, a large number of studies agreed that it affected QOL of schizophrenic clients. In a cross-sectional study of 40 stable, community-tenured schizophrenic clients, subjective and objective QOL across various life domains and global subjective life satisfaction were assessed using the QOLI. A number of significant relationships between indices of psychopathology as measured by the BPRS and QOL emerged. The overall level of psychopathology was negatively correlated with subjective life satisfaction. Specifically, poor mental status was related to diminish satisfaction with leisure activities, social relations, health care needs and utilization, personal safety. Further analysis showed that objective QOL indicators were not significantly related to negative or positive symptom levels or with overall measures of psychopathology. Besides, negative symptoms were negatively correlated with global life satisfaction and subjective QOL indicators. Positive symptoms also correlated negatively with global life satisfaction, but not with subjective QOL indicators (Packer, Husted, Cohen, & Tomllnsom, 1997).

Other studies also found that negative symptoms were related to poorer QOL. Halford et al (1991) found that QOL was inversely related to severity of negative symptoms but independent of positive symptoms. Meltzer et al (1990) reported that both positive and negative symptoms, as measured by the BPRS, influenced QOL and that negative symptoms were more important predictor of QOL than positive symptoms. Browne et al (1996) also found that the severity of negative symptoms was related to a poorer QOL.

In conclusion, many studies agreed that lowered perception of QOL was associated with longer duration of illness, more previous psychiatric hospitalizations and poorer mental status. In particular, evidence supported that negative symptoms had an impact on the QOL in schizophrenic clients.

Although satisfaction with mental health care was not included as a domain in many QOL measures, this variable was likely to impact QOL for clients with persistent mental illness. Studies suggested that the types of services received and agency characteristics were related to QOL. Greater participation in rehabilitation services was associated with lower life satisfaction in life domains (Hachey & Mercier, 1993; Huxley & Warner, 1992). This might be because having to depend on rehabilitation services could exacerbate the feeling of inadequacy that could lower the perceived QOL. Other reason might be that clients utilizing rehabilitation services were individuals who were very conscious of their severe impairment that affected their QOL. Some authors hypothesized that the contribution of services to QOL was related to the availability and accessibility of the services, the characteristics and needs of the individual, and the characteristics of the milieu in which the individual lived (Hachey & Mercier, 1993). Service provision might also mediate the relationship between objective life circumstances and subjective life satisfaction (Skantze et al., 1992). Study on QOL provided opportunities for clients to voice out their needs. It could facilitate the understanding of clients' needs, thus enabled health care professionals in planning better rehabilitative interventions to meet their clients' needs.

Conceptual framework of the study

After reviewing the literature, a conceptual framework was developed to guide this study. As illustrated in Figure 2, the conceptual framework depicted the integration of the concepts of QOL in the literatures and illustrated the relationships between variables that had been discussed in the literature and QOL.

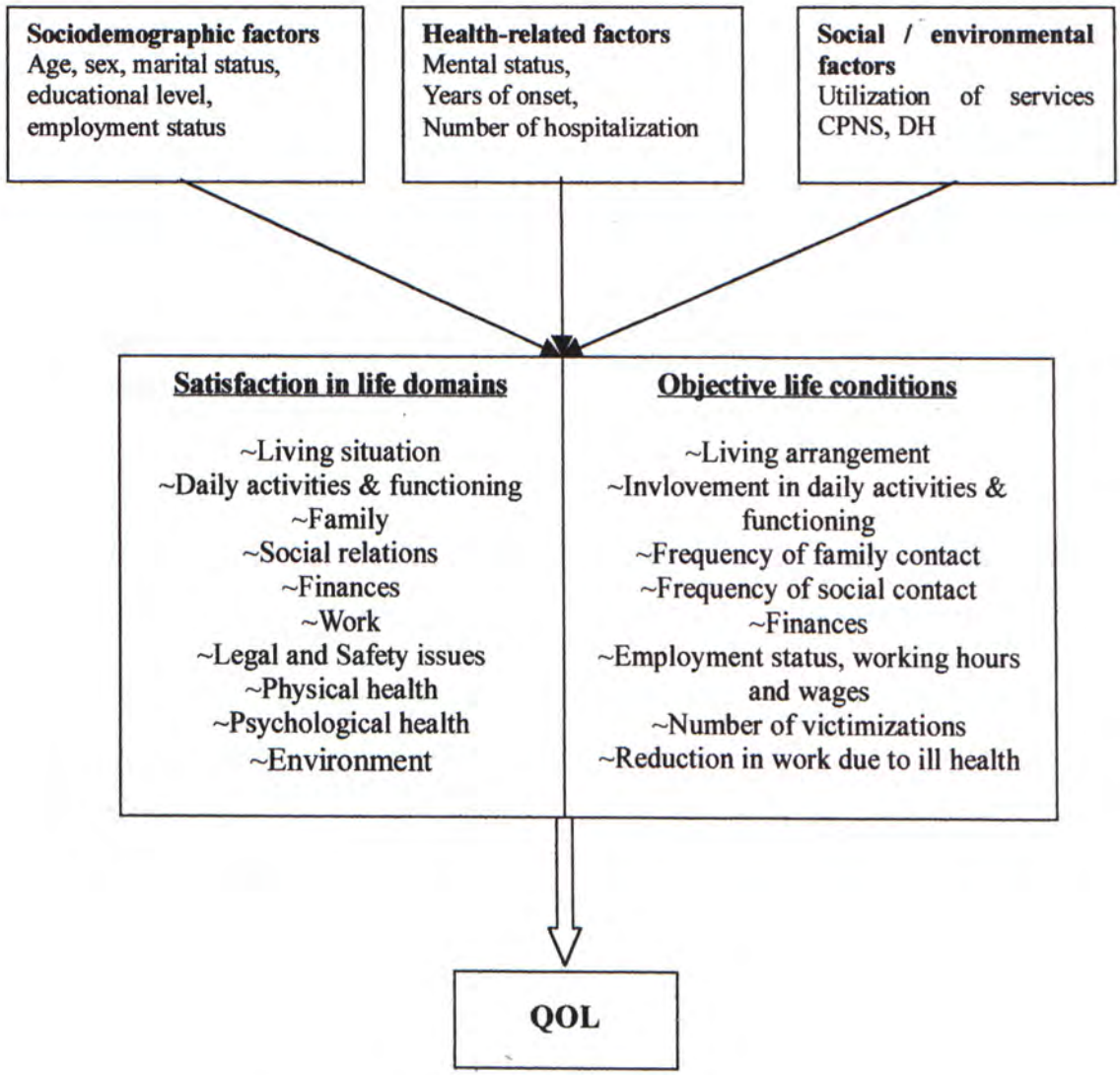

Figure 2: Conceptual Model of Quality of Life

QOL in this study was conceptualized as a multifaceted construct that encompasses the individual's multiple life domains. Structure of QOL included both objective and subjective perception towards their QOL in this wide spectrum of life domains.

The basic structure of this framework was derived from the QOL Model developed by Lehman (Lehman, 1988) and incorporated the WHO conception of QOL. The Lehman's framework, consists of eight life domains: living condition, daily activities and functioning, family relations, social relations, finances, work, legal and safety issues and health, which emphasize on the multidimensional and context-related nature of QOL. It includes both the objective and subjective indicators of QOL. Besides, it consists of aspects of life or difficulties that are commonly encountered by mentally ill clients. The Lehman's QOL framework is one of the most commonly used in QOL study for mental illness as it taps most specific areas of life that are important in speculating QOL of the clients suffering from this illness. Simultaneously, the WHOQOL framework reflects the subjective nature, but it focuses on a broader and more holistic view of QOL, which encompasses the individual's physical health, psychological state, social relationships and the environment (The WHOQOL Group, 1995). The WHOQOL describes core aspects of QOL cross-culturally, therefore, makes comparison possible.

This study measured both the objective and subjective indicators of QOL. It was because the objective parameters, which include the client's economic situation, occupational status, living condition, family and social situations, could add insight into the current life condition of the clients. All domains and dimensions of QOL covered in the WHOQOL and the Lehman's QOL framework were included for the intention to

gain more understanding of one's current sense of well-being. The adoption of a generic measure with disease-specific supplement also aided to capture the additional, specific concerns of clients with the condition that were not contained in generic measures. Simultaneously, information on the life areas that the clients were most or least satisfied with could be acquired through their subjective perception in these aspects of life.

Literatures showed that sociodemographic variable such as age, gender, marital status, educational level, and employment status had impacted QOL. These variables were measured in this study.

Health-related factors such as duration of illness, number of previous psychiatric hospitalization and mental status as assessed by the total BPRS score were found to impact QOL. These factors were investigated in this study too. It was assumed that when assessing the QOL for clients with schizophrenia, who had suffered from the impairments secondary to their active psychotic symptoms, might also experienced profound influence from their negative symptoms such as loss of drive, social withdrawal and a loss of emotional expression. For this reason, both the positive and the negative symptoms were entered into the analysis as separate components. Positive symptoms included hallucinations, unusual thought content, and conceptual disorganization as well as those negative symptoms included emotional withdrawal, motor retardation, blunted affect.

The utilization of mental health services, such as CPNS and DH might also impact QOL. Because CPNS and DH provide continuous close monitoring of clients and are sources of most support for maintaining these clients in the community. The measure of

these factors might provide some insight into these service provisions to maximize QOL of the clients who resided in the community.

Summary

This chapter discussed the definition and measurement of QOL in the literatures. Studies on the QOL of clients with persistent mental illness were examined. Although there is an exponential increase of QOL studies in the past years, there is no universal definition for QOL and method for measuring it. However, it has been commonly agreed that QOL is a multidimensional construct that encompassed the individual's perception in their life circumstances and subjective life satisfaction. QOL included both objective data and subjective ratings by the individual in the level of satisfaction in eight life domains, including living condition, daily activity and functioning, family relationships, social relationships, finances, work, personal safety and health.

Though demographic variables such as age and gender were identified in the literatures as having an impact on the level of QOL for the clients with persistent mental illness, some results were inconclusive. Nevertheless, many studies agreed that lowered perception of QOL was associated with longer duration of illness, more previous psychiatric hospitalizations and poorer mental status, particularly the negative symptoms. The majority of studies on clients with persistent mental illness had been conducted in the Western countries and their results might not be applicable to Hong Kong situations. Little was know about the QOL of those persistent schizophrenic clients resided in the community in Hong Kong. This study aimed to fill these gaps.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter will describe the research design, sampling method and the instruments that were used in this study. It will also include the description of the pilot study and the data collection procedure. Ethical considerations and data analysis procedures of this study will be explained.

Research design

A cross-sectional survey design was used in this study. Cross-sectional design is a one-off data collection method based on observations or information obtained from subjects to capture the phenomena under investigation. It was more economical than the longitudinal approach as no attempt to repeat the data collection procedure would be made. Besides, the data collected would be easier to manage than data generated from repeated measures. The cross-sectional design was appropriate for use in this study, as the purpose of this study was to describe the QOL of the participants and to examine relationships among the studied variables during the time of data collection. This study aimed to study the current situation only and did not intend to compare the change in QOL of the participants with time. Survey is a nonexperimental way of collecting information from the subjects that helps to learn more about how these subjects live and

their beliefs, preferences and attitudes about different things through direct questioning of the subjects (Polit & Hungler, 1999). Survey is considered an effective way to obtain an adequate amount of information needed to describe the characteristics such as the prevalence, distribution, opinions, attitudes, values and interrelations of variables within the population under studied (Polit & Hungler, 1999). The survey design was selected in the light of its feasibility to allow the researcher to collect a broad and specific range of information from the target population within a shorter period of time, yet adequate and appropriate for answering the research questions. The data collected was considered sufficiently rich to describe a profile of the population under study and to explore the nature of association that existed among the selected variables as well as to predict relationships among them. Such prediction could be beneficial to developing plan to improve health care practices (Wood & Haber, 1994).

Method

A structured face-to-face interview by using standardized questionnaires was used to collect data. Prior the study, the researcher had to determine in advance the categories of interest in order to acquire all relevant information during data collection to answer the research questions. Therefore, a set of questions was prepared beforehand. These questions had been contained in the instruments used in this study. This structured interview schedule asked questions in a standard condition or consistent manner and required participants to answer the question in a fixed number of alternative responses. It simplified the participants' task and thus, the participants would be more willing to

participate in the study. Besides, the data collected would be focusing on the interests of the study because the approach in data collection was systematic. The researcher could control unexpected information and avoid irrelevant answers. It was justified for use in this study because the aim of the study was to capture data on the QOL of the participants as measured by the selected instruments. There was no attempt to collect qualitative data that were beyond the purpose of the current study.

The face-to-face interview is considered the most useful method of collecting survey data because of the quality of the information yielded can be ensured (Polit & Hungler, 1999). The face-to-face interviews in this study provided opportunities for the researcher to explain thoroughly the purpose of the study to the participants, establish rapport, assure confidentiality and anonymity and persuade the participants to take part in the study. It appeared that the majority of potential participants were willing to participate in the study after thorough explanation and encouragement as well as establishing rapport with the researcher. It helped to increase the response rate. The participants were typically more disclosing, honest, and responsive when their relationship with the researcher was warm and comfortable. The researcher therefore made attempts to be pleasant, respectful, and nonjudgmental to facilitate communication with appropriate responses.

In addition, data collection by using a face-to-face approach was advantageous as many mentally ill clients were illiterate and had difficulty in understanding written languages. It also provided opportunities for the researcher to explain and clarify confusion and concerns about the study and minimize misunderstandings in the questionnaires by the participants. Besides, the researcher could observe the level of

participants' understanding and cooperativeness throughout the interview. If the participants appeared to be in doubt or annoyed by the interview, the researcher could make the questions clear immediately by further explanation or clarification. Participants could be invited for a break before continuing the interview to avoid them from being exhausted or losing interest to participate.

In summary, a cross-sectional survey design using structured face-to-face interviews by means of questionnaires was used in this study. This study design enabled the researcher to generate a profile of the QOL of the persistent schizophrenic outpatients in the Hong Kong community.

Sampling

The subjects in this study were recruited from the outpatient attendants of the general adult team at the Out-Patient Department (OPD) in the Department of Psychiatry of a regional hospital in Kowloon. This hospital was chosen as the study venue because it served 15,000 outpatients of ages between 18 to 65 from the Kowloon Central clusters. It has a large catchment area that covered the main districts in the Kowloon Central region and Sai Kung.

Participants were selected from all follow-up attendants of the OPD with the diagnosis of schizophrenia and with persistent illness. A client with persistent schizophrenia is operationally defined in this study as one who has been diagnosed schizophrenia according to criteria of the Diagnostic Statistical Manual IV for at least 2

years (Goldman et al., 1981). This group of clients was selected as participants in this study because at present, about 80% of clients in the community, who had persistent mental illness, have a diagnosis of schizophrenia. The readmission rates of these clients were frequent. They might have a poor QOL due to their long duration of illness, poor social support and difficulties in daily functioning (Chan et al., 1999).

A set of inclusion and exclusion criteria for the participants was determined to ensure a homogenous group in this study.

The inclusion criteria were:

- clients with the diagnosis of Schizophrenia
- clients who had the diagnosis of Schizophrenia for more than 2 years

The exclusion criteria were:

- clients coexist with other psychiatric diagnosis, e.g. neurosis, personality disorder, mood disorder, alcohol and substance abuse, learning disability
- clients with significant neuro-cognitive impairment such as dementia
- clients with visual, language and communication difficulties
- clients who were judged by the attending psychiatrists to be too unwell to participate in an interview
- clients who had been invited to participate in the pilot study

It was estimated that about 75% of the attendants in the OPD had the diagnosis of schizophrenia and approximately 80% of them were eligible to participate in this study. The total number of attendants in this OPD was about 15,000. Therefore, the number of target population should be 9,000, which would be too large to be included in this study. It was considered more feasible to use a proportion estimate, that is, the total number of eligible attendants per week, to calculate the desirable sample size for this study. As the attendance rate per week was 743 in average, the estimated number of eligible participants should be 446. According to Wang, Fitzhugh, and Westerfield (1995), the recommended sample size for the survey of a population size of 446 was approximately 170 with the recommended population proportion estimate, p=0.50, at the 95% confidence level. This sample size was also justified as adequate to perform the stepwise regression analysis (Green, 1991).

A list of attendants was obtained a day prior the date of data collection. The researcher selected the eligible attendants from this list after case-notes review as well as consultation with the respective attending psychiatrists. A convenience sampling technique was used in this study because of the difficulty in recruiting a random sample. Many potential participants did not attend their follow up in the OPD according to the time schedule, sometimes they were late or even default the follow-up while some of them arrived much earlier than the appointment. Besides, it was difficult to identify and approach all the selected clients at the same time. Therefore, the researcher approached anyone who was available or could be recruited to participate in the study from the list of eligible participants during each recruitment period. Besides, these eligible attendants could only be identified when they turned up and registered at the general office of the

OPD. The researcher approached them to invite their participation in the study with thorough introduction and explanation on the purpose of the study. Those clients, who were willing to participate, were recruited in the study. They were interviewed during the time while they were waiting for medical consultation or collecting medication at the Pharmacy. Participants were recruited until the desired number was reached. The convenience sampling technique was regarded as appropriate because of the difficulty in locating and reaching all the eligible participants at the time of data collection and in this study, random sampling was not possible.

Although the sampling method used for this study would raise issues of sample bias, it was considered most practicable and feasible given the time constraints, cost and limitation in resources for this study. This non-probability method of sampling was also justified as this study was a preliminary research effort to obtain a profile of the QOL and explore the QOL variables of the participants, without incurring the cost or time required selecting a random sample. In addition, the convenience sample of 176 was considered adequate for the stepwise regression analysis.

There were problems during the recruitment. Even though the eligible participants were identified and located, most of them were not willing to participate in the study. The refusal rate on initial approach was as high as 40%. Another problem existed was that even though the clients had promised to participate in the study, they were called to attend the medical consultation and were not able to participate. Besides, there were instances that the researcher missed the opportunities to interview those who agreed to participate after their medical consultation, as the researcher was conducting another interview. To overcome these problems, all the identified eligible clients were given

sincere and thorough explanation to persuade them to participate in the study. They were encouraged to wait for the researcher in order to continue in the interview after their medical consultation in case they were called to enter the consultation room. They were also welcomed to set the date and time that was more convenient for them to participate in the study. Consequently, the final total response rate in this study was 28% (n=47). It was encouraging that with thorough explanation of the aims and purpose of the study, most of the contacted clients participated in this study eventually. Those refused to participate were mostly very quiet and avoiding any social contact or too suspicious to accept any explanation and reassurance.

Measurements

The Brief Psychiatric Rating Scale (BPRS), the Hong Kong Chinese WHOQOL-BREF, the Lehman Quality of Life Interview-short version (QOLI) were used to collect data. A demographic data sheet was used to collect the demographic data of the participants. All instruments are described in the following subsections.

The Brief Psychiatric Rating Scale

The Brief Psychiatric Rating Scale (BPRS) (Overall, 1974; Overall & Gorham, 1962) was used to assess the mental state of the participants. All eligible participants were assessed on the presence and severity of the symptoms in the scale before the administering of other questionnaires. The BPRS was an 18-item symptom construct

scale that was rated on a 7-point scale of severity. Scoring for each item ranged from 1 (not present) to 7 (extremely severe). The items included assessment on somatic concerns, anxiety, emotional withdrawal, conceptual disorganization, guilt feelings, tension, mannerisms and posturing, grandiosity, depressed mood, hostility, suspiciousness, hallucination, motor retardation, uncooperativeness, unusual thought content, blunted affect, elation, psychomotor excitement. Each item was scored based on the verbal response of the participants and observations of the participants during the interview. A total score was derived from the sum of the 18 items, which gave the general picture of the mental state of the participants. The maximum possible score obtained was 126 and the minimum was 0. The larger the score obtained, the poorer the mental state of the participants. Sample of BPRS is presented in Appendix 1 and the manual of scoring for the BPRS is illustrated in Appendix 2.

In this study, total scores in items of emotional withdrawal, motor retardation and blunted affect of the BPRS were used to assess the severity of negative symptoms whereas, total scores in items of conceptual disorganization, hallucinatory behaviour and unusual thought content of the BPRS assessed severity of positive symptoms.

The BPRS was selected as it was a widely studied and well-validated measure of general psychiatric symptoms (Aron, 1993). Various reliability studies, using diverse samples, had been reported in the literature and range from 0.52 to 0.90 (Dingemans, Frohn-DeWinter, Bleeker, & Rathod, 1983; McGorry, Goodwin, & Stuart, 1988; Overall & Gorham, 1962). It had been used in Hong Kong in studies of similar group of clients (Chan et al., 1999).

The WHOQOL-BREF-HK

The WHO had collaborated with 15 field centres around the world to develop two instruments for measuring QOL (the WHOQOL-100 and the WHOQOL-BREF), that could be used in a variety of cultural settings whilst allowing the results from different populations and countries to be compared (The WHOQOL Group, 1995). The WHOQOL scale is a generic measure of QOL that covered a broad range of issues that people in a variety of cultures regarded as important contributors to QOL. The instrument had been rigorously tested to assess its validity and reliability in each of the field centres.

The original version contained 100 items to assess a range of different domains that covered physiological well-being, physical well-being, level of independence, social relationships, physical environment and personal meaning, each of which was broken down into specific sub-domains or facets. A short version of 26 items, the WHOQOL-BREF, was also designed.

Hong Kong had set up the HK Project Team on the Development of the HK Chinese version WHOQOL scale. The team had translated the WHOQOL and modified the scales for use locally (Leung, Chu, & Lau, 1997). The WHOQOL-BREF-HK, which had a total of 28 items, was developed eventually. Samples of the English and Chinese version of the WHOQOL-BREF-HK are presented in Appendices 3a and 3b respectively.

A study was conducted in Hong Kong in 1997 by using the Chinese version of both WHOQOL and WHOQOL-BREF-HK scale and found it psychometrically sound and relevant for use in the Hong Kong Community. Pearson's correlation coefficients between the WHOQOL facet scores and WHOQOL-BREF-HK item scores ranged from 0.52 to 0.91. Linear regression was used to explore the extent to which variances of WHOQOL were explained by the BREF form. Results showed that the BREF form predicted more than 50% of the variability of the participants' rating in the full version. It demonstrated that both versions were found sound for application in clinical settings in Hong Kong culture. The WHOQOL-BREF-HK was able to approximate the results yielded by the full version, thus was a more efficient instrument than the full version (Chan, Leung, & Lin, 1997).

The WHOQOL-BREF-HK was chosen for use in this study. It was because too long a questionnaire would be too stressful and unwelcome by the participants. Participants were asked to rate each item on a 5-point Likert scale (1=the least satisfied and 5=the most satisfied) as they recalled their perception on QOL in the past one month. A higher score indicates better QOL of the participants.

The Lehman Quality of Life Interview – brief version

The Lehman's Quality of Life Interview (QOLI) was a structured interview designed to assess the QOL of people with severe mental illness (Lehman, 1988). It had been one of the most widely used disease-specific QOL measures for people with mental illness in a variety of settings, including inpatients, outpatients, and non-patient

samples (Barry & Crosby, 1996; Lehman, 1988; Rosenfield, 1992).

The QOLI contained a global measure of life satisfaction, as well as measures of objective and subjective QOL in eight life areas: Living Situation; Daily Activities and Functioning; Family Relations; Social Relations; Finances; Work; Legal and Safety Issues; Health. Each QOLI domain is organized in such a way that information is first gained from objective QOL indicators and followed by the subjective appraisal of satisfaction in that area. Objective indicators are regarded as the actual life experiences and access to resources. Examples of objective QOL indicators included length of time at present residence, frequency of family contact, social contact, quantity of daily activities and amount of monthly income. Examples of subjective QOL indicators included satisfaction with living conditions, family relationships and finances.

The psychometric properties of the QOLI had been studied extensively. The mean internal consistency was 0.85 for the subjective indices, and 0.68 for the objective indices (Lehman, 1988). The mean of one week test-retest reliabilities for the QOLI subjective indices was 0.72 and 0.65 for the objective QOL indices. Content and construct validity had been evaluated as strong on the basis of confirmatory factor analysis (Lehman, 1988). Specifically, the factor analysis revealed the presence of a single factor for each scale (e.g., items on the subjective scale for Social Contact all relate to an individual's satisfaction with relationships with others). Construct validity was evaluated across three domains; objective/subjective response concordance, the correlation of demographic variables (e.g., income) with domain-specific objective measures (e.g. financial adequacy), the correlation of domain-specific subjective QOL measures with general life satisfaction. The results indicated that there were strong

correlation between demographic variables and domain-specific objective measures.

The brief version of the QOLI was also available (Lehman et al., 1993). As with the core version, this provides a broad-based QOL assessment and consists of 78 items, taken from the full version (Appendix 4a). It is also a self-report interview and measures the same life domains as the core version, including the global measure of life satisfaction as well as measures of objective and subjective QOL in the eight life domains. Participants were asked to rate their feelings and experience in the past one month.

The QOLI had already been translated into Chinese and used in a study conducted by Cheung in 1995. Because the Chinese version of the Lehman QOLI had not been validated yet, a test on the Chinese scale was conducted to confirm the validity and reliability before the actual study. Three senior colleagues of the researcher in the study hospital were asked to comment on the Chinese version of the Lehman QOLI. They all affirmed the face validity of the instrument. One of the colleagues of the researcher was then invited to perform the backward translation of the Chinese version of the Lehman QOLI into English to examine the consistency in the meaning of the Chinese version with the original English version. Minor modification was made so as to increase clarity and preciseness of the scale. Some wordings of questioning were revised for ease of administering and comprehension. The final Chinese version of Lehman QOLI is presented in Appendix 4b.

Application for approval was made from the Ward Manager of CPNS of the study venue to conduct the reliability test of the QOLI (Appendix 5). Invitation letters to explain the purpose of the reliability test and invite participation were given to clients who were receiving CPNS (Appendix 6a and 6b). 20 of them consented to participate. The questionnaire was administered to these clients twice in one-week interval. The test-retest reliability coefficients for the life domains were as follows: living situation=0.77, daily activities=0.81, family relationship=0.66, social relationship=0.78, finance=0.88, work=0.65, legal and safety=0.8, health=0.74. The mean of the test-retest reliability coefficient for all domains was 0.76, which was considered satisfactory (Polit & Hungler, 1999).

Demographic Data Sheet

Sociodemographic data was obtained from the participants that included age, gender, marital status, educational level, employment status and place of accommodation. Participants' clinical characteristics were obtained by asking information about their duration of illness, the number of previous psychiatric hospitalizations and current oral/depot medication, and the engagement in rehabilitation programmes at the day hospitals or community psychiatric nursing services (CPNS) during the past three months. Samples of both English and Chinese version of the demographic data sheet are presented in Appendices 7a and 7b respectively.

Pilot Study

A pilot study had been performed on 20 participants recruited from the OPD in the study venue before the actual study. This pilot study aimed at estimating the time required for the interviews and identifying any unforeseen problems in any parts of the procedure. Participants were administered the Chinese translation of the Lehman QOLI, the WHOQOL-BREF-HK, the Brief Psychiatric Rating Scale (BPRS) and the demographic data sheet.

It was noted that most of the clients were willing to participate after understanding the purpose of the study and building up rapport with the researcher. With some prompting and explanation of the items, majority of the clients was able to understand the questions well and gave their answers in a sensible way. Some clients were very eager to ventilate their problems and the researcher had to render counseling and support at the end of the interview and at the same time, tried to help the clients to focus on the interview. In some situations, there were clients who were too suspicious or harboured some hallucinations that prevent them from concentrating in the interviews. The researcher had to be very skillful in asking the questions as well as giving thorough explanation to each question. The time of the interviews had ranged from 45 minutes to an hour. The participants who had participated in the pilot were excluded from the main study.

Data collection

The data collection took approximately 18 months to complete. The study plan was shown in Appendix 8. A list of follow-up attendants was generated from the computerized outpatient attendants system in the study venue. The list was obtained one day prior to the period of data collection. It included the particulars of the follow-up attendants such as name, sex and age as well as their clinical diagnoses and attending psychiatrist. In this study, only those clients with the diagnosis of schizophrenia and with persistent illness were selected. Having identified the clients with the diagnosis of schizophrenia, the researcher reviewed their case-notes and to seek advice from the attending psychiatrists to identify potential participants that were eligible for participation based on the inclusion and exclusion criteria for this study.

On the dates of data collection, the researcher identified those potential participants when they registered at the General Office of the study venue. Once each potential participant was identified, the researcher approached him or her to ask if they agreed to participate in a study on their QOL. The study required that the participants be able and willing to speak about their personal thoughts and feelings as well as able to give their answers to all items in the instruments. Thorough explanation of the aims and objectives of this study were given to the potential participants. They were reassured of the confidentiality of all information they gave. They were encouraged to answer the questionnaires from their own perspectives. There were no right or wrong answers.

During the initial approach, rapport was established with the participants through a sincere and respectful attitude to gain their cooperation. They were encouraged to raise

their concerns about this study. During this process, the researcher also judged whether the participant was cooperative or able to tolerate further QOL assessment. Those clients, who were unwilling or not able to complete the interview, were explained by the researcher courteously and tactfully that their willingness to engage in the study was much welcomed and appreciated.

It was explained to the participants that their participation was voluntary, and they could withdraw their consent at any time. They were assured of the confidentiality of information they provided. Participants were advised to tell the researcher if they regarded the questions caused them unpleasant or upsetting feelings. They were also given an invitation letter with consent form (Appendix 9a & 9b), which included the phone number and working place to reach the researcher if they had concerns or queries about the study. The study's objectives and the procedures were fully explained to them and they were required to sign on the consent form if they agreed for participation in this study. After signing the consent forms, each participant was interviewed in a quiet area without other clients and staff presented. This could minimize distraction and maintain their privacy. As the follow-up attendants usually have long waiting time for consultation and collection of medication, they were interviewed during the waiting time.

Each person who agreed to participate was provided a copy of the interview questionnaire. During the interviews, the researcher read the questionnaire items aloud as participants read along. After each item, participants were asked for their response, which was noted on the research questionnaires.

Ethical considerations

Application for the use of the Chinese translation of the Lehman QOLI-short version was sent to the author in February, 1999 (Appendix 10). Notification for using WHOQOL-BREF-HK was also made at the same time. Permission to use the WHOQOL-BREF-HK and the Chinese translation of the Lehman QOLI-short version was granted from the authors in March, 1999 (Appendix 11 and 12). Besides, ethical approval was applied from the Faculty of Medicine, the Chinese University of Hong Kong and permission obtained before commencing the study (Appendix 13). Ethical approval from the Ethical Committee of the study hospital was sought in March, 1999 (Appendix 14). Permission to collect data in the study hospital and venue was gained in April, 1999 (Appendix 15).

Before the interviews, informed voluntary consents were obtained from the participants with purposes of the study explained and confidentiality, anonymity assured. All participants were informed of their right to terminate their participation at any time, to refuse to give information or to ask any questions for clarification about the purpose of the study or specific questions. They were reassured that all the completed questionnaires were anonymous and would be stored in such a way as to prevent identification of individual and violation of their confidentiality. In addition, all information collected in the study would be erased after completing the research.

As rapport was established before the interview, and there was a preliminary screening for mental state of the participants, as well as techniques in questioning were exercised, the risks of triggering distress within the participants were kept minimal. All

participants were fully acknowledged that the answers they gave reflect their own personal views and perspectives about their QOL. There were no right or wrong answers. Besides, the participation in the study would not affect their treatment, as individual information would not be disclosed to their colleagues in the OPD. In addition, privacy of participants was considered. They were interviewed in a quiet place so that the information they gave would not be exposed.

The study would not give any harm to the clients but instead, possible benefits could be gained from participation in this study, as more knowledge about their QOL would generate implications for service provision for them.

Data analysis

Data were entered into the Statistical Package for Social Science (SPSS) version 10.0 for exploratory analyses and subsequent multiple regression analysis. Sociodemographic characteristics were summarized by descriptive data. Descriptive analyses such as frequencies, means and standard deviations (SD) were performed on each scale to summarize data.

Table 1 presented the summary of the statistical tests that had been used in this study.

Table 1

Summary of the statistical tests used in this study

Statistical test	Data in this study	Purpose
Spearman's rank correlation	Correlation between satisfaction ratings and objective indicators in QOLI	To estimate the strength of relationships of two ordinal data
Pearson product-moment correlation	Correlation in the mean ratings of question 1 and question 10 in QOLI	To estimate the strength of relationships of two interval data
	Means of satisfaction ratings in the items in QOLI Means of satisfaction ratings in items in WHOQOL Means of total BPRS scores, positive symptoms scores and negative symptoms scores	To estimate the strength of relationships between mental status and perception of QOL
	Means of satisfaction ratings in the items in QOLI Means of satisfaction ratings in items in WHOQOL Means of years of onset of mental illness among the participants	To estimate the strength of relationships between years of onset of mental illness and perception of QOL
T-test	Engagement in daily activities of males and females Frequency of social contacts of males and females Means of satisfaction ratings in the items in QOLI Means of satisfaction ratings in items in WHOQOL	To test significant different between the means of two groups of participants, i.e. males and females, employed and unemployed, CPNS and non-CPNS recipients, DH and non-DH attendants
ANOVA	Means of satisfaction ratings in the items in QOLI Means of satisfaction ratings in items in WHOQOL	To test significant different between the means of more than two groups of participants, i.e. different age groups
Multiple regression analysis	Means of total WHOQOL, physical health domain, psychological health domain, social domain, environmental health domain scores Gender, age, educational level, employment status, total BPRS score, years of onset of mental illness, number of hospitalization, recipients of CPNS	To identify whether the sociodemographic variables, clinical factors and utilization of services were predictors of QOL

Relationships between the objective and subjective indicators were tested by correlation. Correlation analysis was also performed to estimate the degree of the relationships among the sociodemographic characteristics, mental status and QOL. Spearman's rank correlation and Pearson product-moment correlation were used according to the level of measurement of the study variables. The Spearman's rank correlation was used for ordinal data while the Pearson product-moment correlation was used for interval data. T-test was performed for comparing variables between two groups whereas ANOVA was performed for comparing variables among different groups. Stepwise regression analysis was carried out in order to identify whether the sociodemographic variables, clinical factors and utilization of services were predictors of QOL for schizophrenic outpatients. All analyses were considered statistically significant with obtained p-values <0.05.

Summary

This chapter introduced the methodology of the study. This study used a cross-sectional survey design by structured face-to-face interviews on the outpatient attendants in the study venue, who were diagnosed with persistent schizophrenia. The BPRS, Hong Kong Chinese WHOQOL-BREF and QOLI were used to collect data together with a demographic data sheet. This chapter also presented the data collection procedure and the results of the pilot study. Besides, the ethical issues of the study were addressed. Mean, SD, correlation, t-test, ANOVA and stepwise multiple regression analysis was used to analyze data. Results of the study will be presented in Chapter 4.

CHAPTER FOUR

RESULT

Introduction

The results of the study will be presented in this chapter. The first section will introduce the demographic characteristics of the participants. The perceived QOL of the participants will be presented as well. The next section will examine the relationships of key variables – sociodemographic, clinical factors, utilization of services with QOL. The last section will present the correlations among the variables and predictors of QOL.

Sociodemographic characteristics of the participants

There were a total of 176 participants in the study. The numbers of males (n=91) and females participants (N=85) were similar (Figure 3). They ranged from 18 to 65 years old. Figure 4 showed the age ranges of the participants. Comparatively there were fewer participants who were between 18 to 25 (13.1%, n=23) and 46 to 55 years old (15.9%, n=28). Only 5.7% (n=10) were 56 to 65 years old. Educational level of the participants was illustrated in Figure 5. Most of them had received education up to secondary level or at least primary level. 4% (n=7) were university graduates and 4.5% (n=8) were illiterate. For the marital status (Figure 6), 48.9% of them was single and never married (n=86). Others were either married or cohabitated (n=49) and divorced or separated (n=36). Only 2.8% were widow or widower (n=5). There were more

unemployed participants (56.8%, n=100) than the employed (43.2%, n=76) in Figure 7.

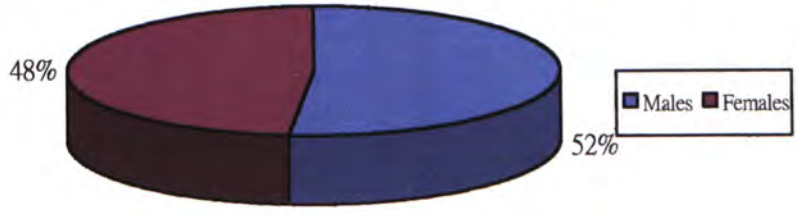

Figure 3: Gender of the participants

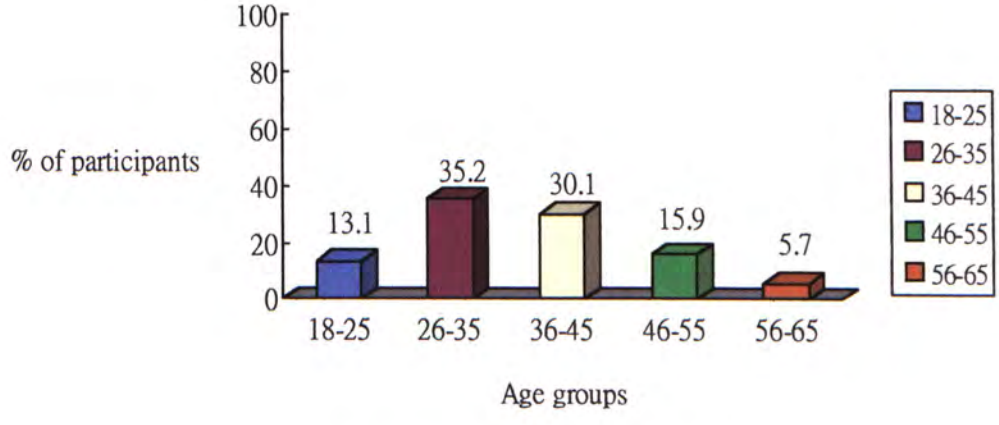

Figure 4: Ages of the participants

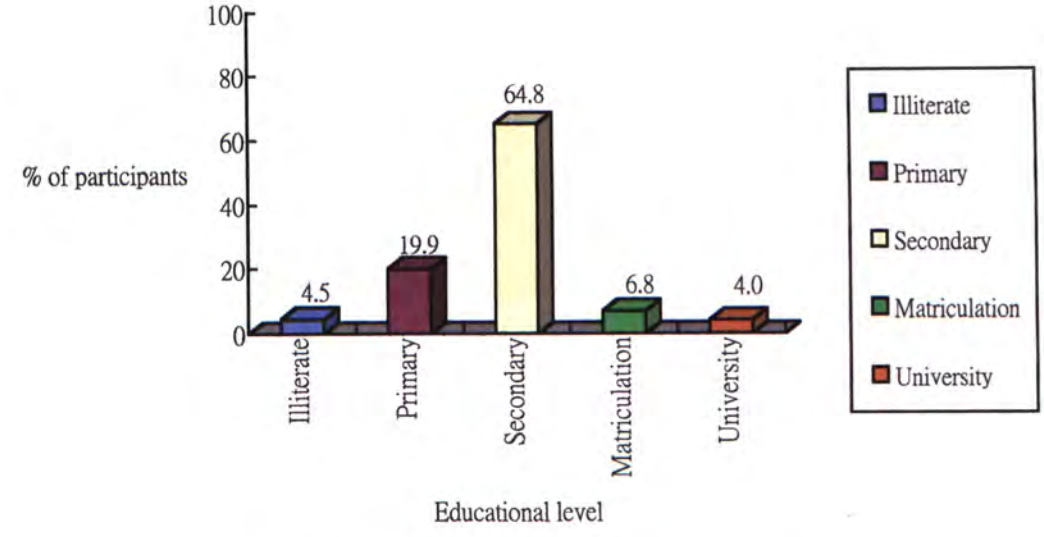

Figure 5: Educational level of the participants

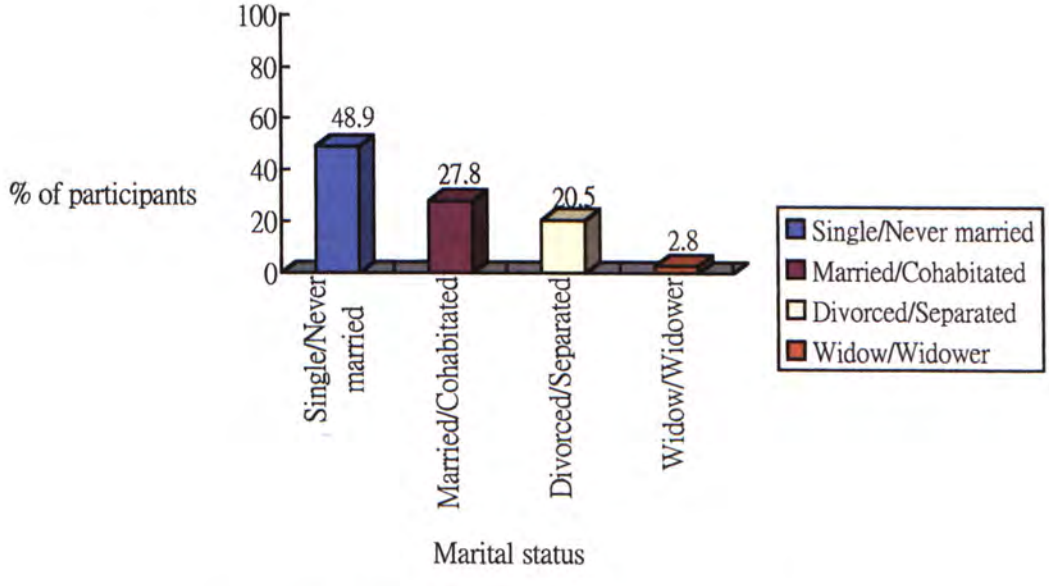

Figure 6: Marital status of the participants

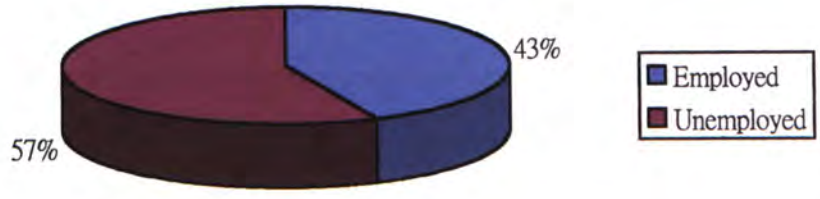

Figure 7: Employment status of the participants

The community living arrangements of the participants were shown in Figure 8. Most of them resided with their family (n=127). The next common places of residence were either lived alone (n=27) or lived in half way houses (HWH) (n=17). There were only a few of them (n=2) lived in long-stay care homes (LSCH) or with their friends (n=3).

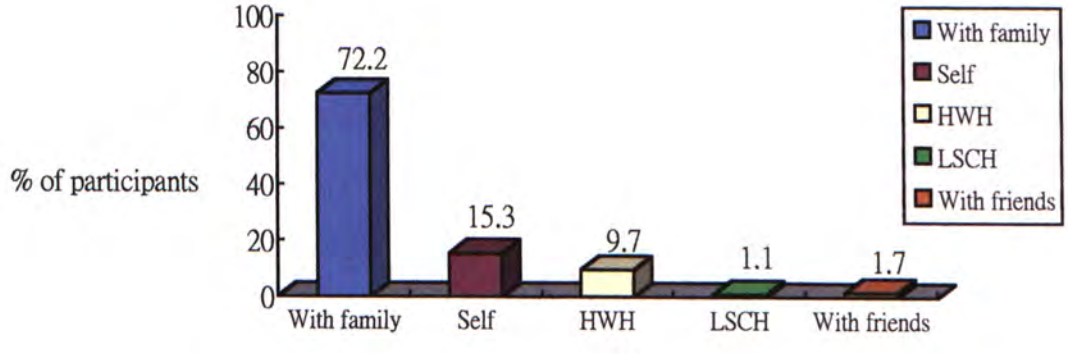

Figure 8: Community living arrangements of the participants

The sources of financial support of the participants were shown in Figure 9. The most usual financial resource was the Comprehensive Social Security Allowance (CSSA). 60.8% of the participants (n=107) were CSSA recipients. There were comparatively fewer participants who received other means of financial support such as salary (n=74), family (n=64) or their own savings (n=27).

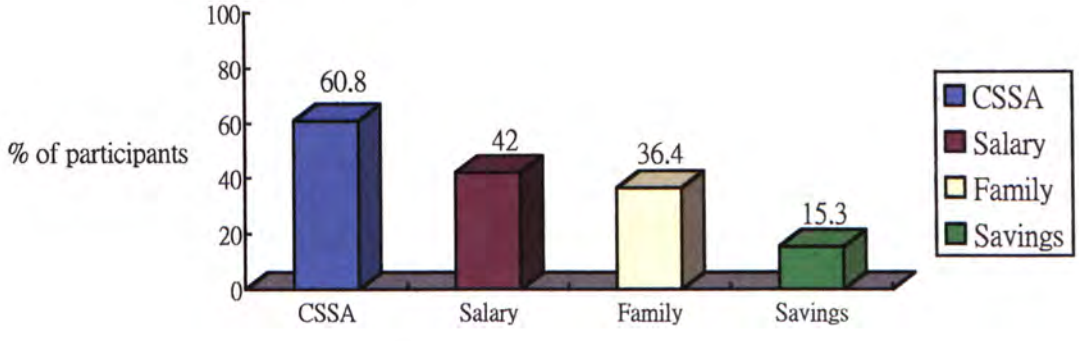

Figure 9: Financial resources of the participants

Figure 10 presented the amount of money the participants received and spent per month. More than half of them had received $500 - $3,000 a month (n=100). There was also quite a lot of them (38.1%, n=67) had received $3,001 - $10,000. Very few participants (4.5%, n-8) reported that they had received $10,001 - $40,000 per month and a very small percentage of them (0.6%, n=1) had received more than $40,000 per month. About half of them (51.7%, n=91) indicated that they had spent approximately $500 - $3,000 per month. 15.3% (n=27) reported having $3,001 to $6,000 to spend and 9.7% (n=17) had less than $500 to spend. There were a few participants (6.3%, n=11) who had more than $6,000 to spend. However, quite many participants (17%, n=30) reported a lack of awareness or attention to the amount of money they spent per month.

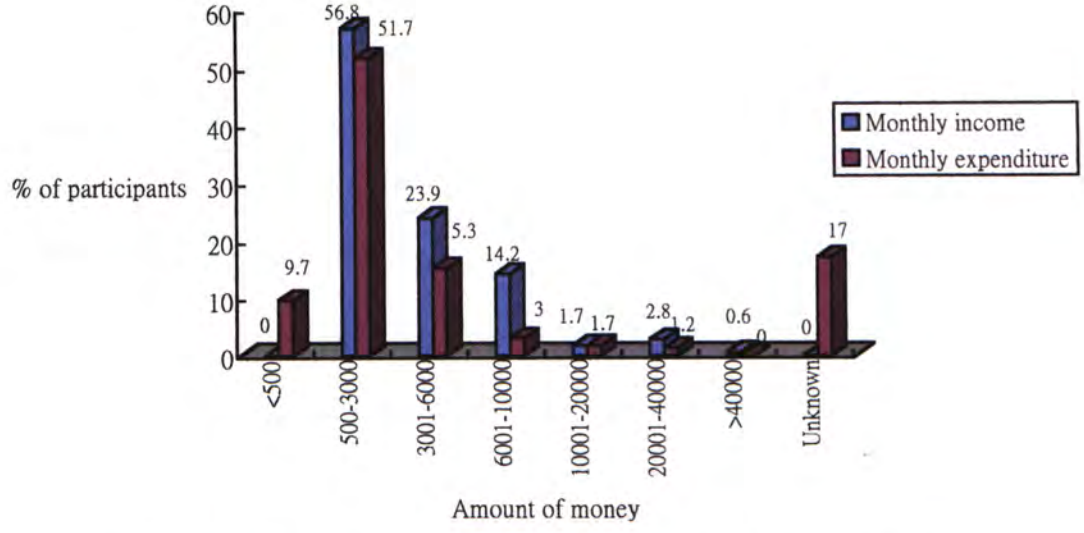

Figure 10: Amount of money the participants received and spent a month

The types of occupation for the working participants were presented in Figure 11. The number of working hours for those currently employed participants was represented in Figure 12. These tables only included data from the subset of the sample that were working during the time of interview. Many participants were working in sheltered workshops or voluntary agencies (47.4%, n=36). Many of them (36.8%, n=28) involved in manual, technical and clerical work. Other occupations that they were involved in included running own business (n=5), medical and health (n=3), sales (n=2), and security guards (n=1). One participant involved in volunteer work. The highest proportion of participants (27.7%, n=21) had to work about 41 to 50 hours a week.

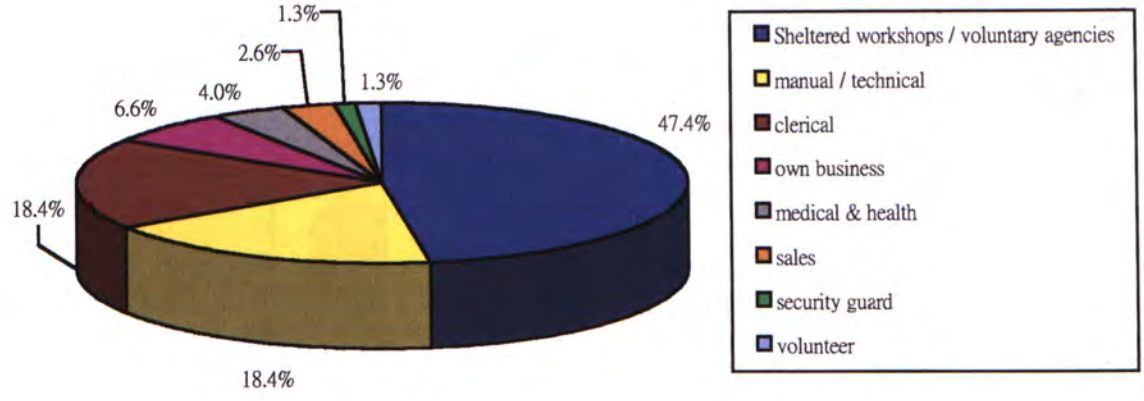

Figure 11: Occupation of the working participants

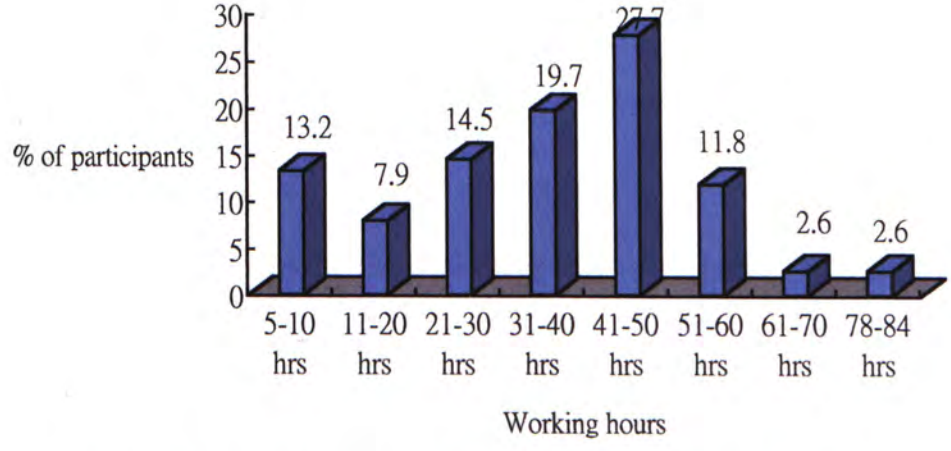

Figure 12: Weekly working hours of the employed participants

Figure 13 indicated the amount of pay that the participants had earned at their jobs. The table showed data only from the sub-sample of those participants who were working during the study period. The majority of these working participants (51.4%, n=37) earned minimum wages of less than $3,000 per month. Only 4.1% of participants (n=3) earned as much as $30,000 monthly.

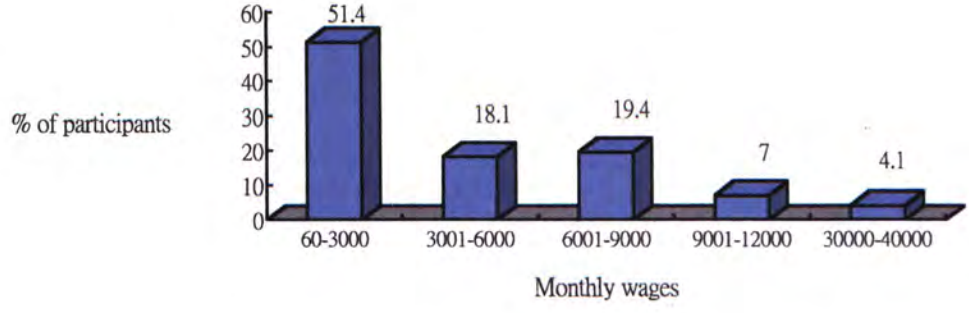

Figure 13: Monthly wages of the working participants

Clinical Characteristics of the participants

Figure 14 and 15 showed the years of onset of mental illness and the number of psychiatric hospitalization of the participants. In this study, only clients who had been diagnosed with schizophrenia for more than 2 years were recruited. Therefore, the minimum years of onset were 2. The maximum years of onset for the participants were 31 years. A large proportion (58%, n=102) had the illness for 2 to 6 years. Comparatively, few of them (9%, n=16) had a longer than 18 years history of mental illness. Only 8.5% of participants (n=15) had never been admitted into psychiatric hospitals. The majority of them (63.1%, n=111) had one to three hospitalizations. The others had multiple psychiatric hospitalizations from 4 to 31 times (n=50).

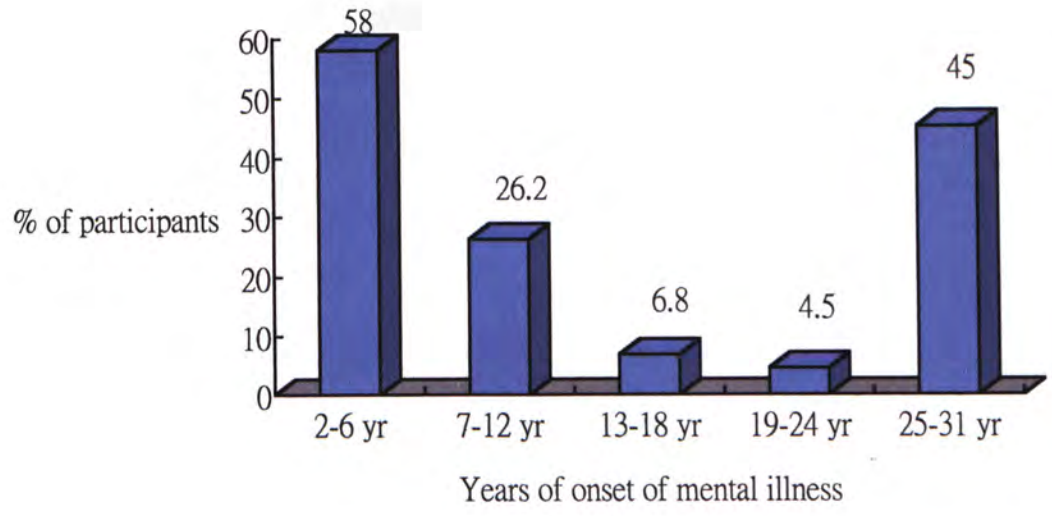

Figure 14: Years of onset of mental illness of the participants

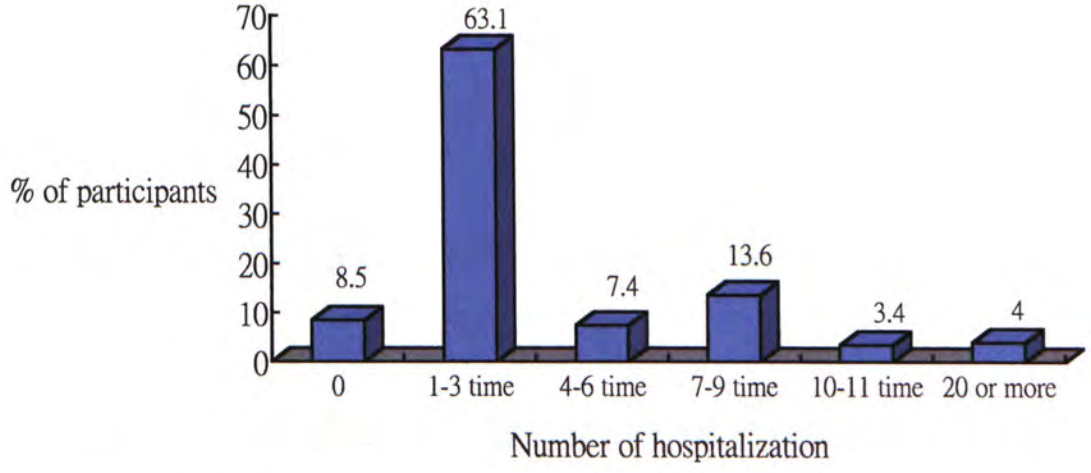

Figure 15: Number of previous psychiatric hospitalizations of the participants

From the scores of the BPRS that were shown in figure 16 and 17, the participants did not have very severe symptoms. Symptoms were even totally absent in 29% of the participants (n=51). The participants suffered from more negative symptoms than positive symptoms because more of them had a lower positive symptoms score.

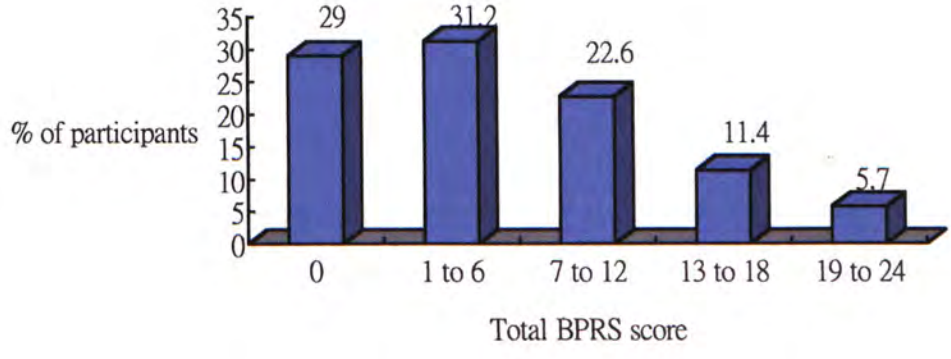

Figure 16: Total BPRS score of the participants

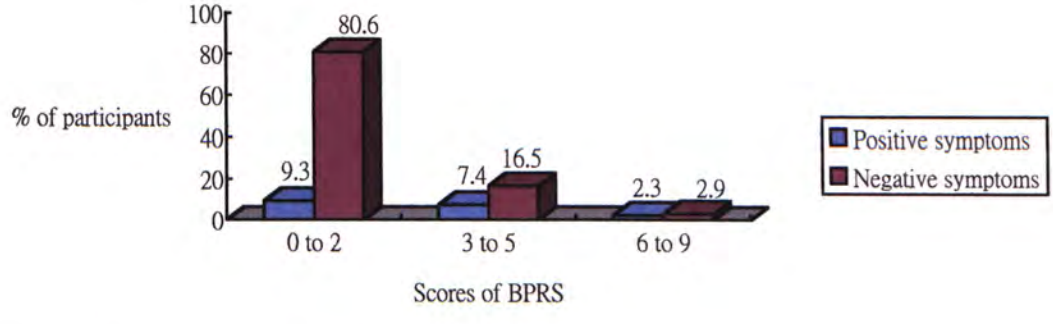

Figure 17: BPRS score in the positive and negative symptoms of the participants

With regard to the psychiatric treatment, table 2 showed that nearly all participants (96.6%) had to take oral anti-psychotic medication, while 24.4% of them also required the combination of both oral medication and depot injection in a regular basis. 25.6% of participants received only regular depot injection. Table 3 presented the utilization of after-care services in the past three months, which included DH and CPNS. Majority of them did not receive services from DH or CPNS. Only 16.5% of them were attending day hospital and 30.1% receiving CPNS in the past three months at the study period.

Table 2

Medication Characteristics of the Participants

Medication Characteristics	Yes		No	
	n	%	n	%
Oral medication only	170	96.6	6	3.4
Depot injection only	45	25.6	131	74.7
Both oral medication and depot injection required	43	24.4		
Total number of participants (N=176)				

Table 3

Utilization of DH and CPNS of the Participants

Utilization of services	Yes		No	
	n	%	n	%
Day Hospital	29	16.5	147	83.5
Community Psychiatric Nursing Service	53	30.1	123	69.9
Total number of participants (N=176)				

Table 4 compared the clinical characteristics between male and female participants. There were no significant differences between male and female participants in the number of previous hospitalization, total BPRS score, positive and negative symptom scores in the BPRS. However, significant difference was found in the years of onset of mental illness between male and female participants (t=0.155, p=0.04). The male participants had a significantly longer duration of mental illness (mean=9.10, SD=7.36) than the females (mean=7.10, SD=5.17). When comparing the mean scores in other variables, it showed that males had a smaller number of psychiatric hospitalizations and a better mental state than the female participants in this study. Females elicited more severe positive symptoms than the males though the severity of negative symptom was similar in both genders. However, the differences were not significant.

Table 4

Clinical variables between males and females

		Mean	SD	t	p
Years of onset on mental illness	Male	9.10	7.36	0.155	0.040
	Female	7.10	5.17		
No. of hospitalization	Male	2.62	2.20	0.136	0.073
	Female	3.38	3.24		
Total BPRS Score	Male	5.47	6.49	0.118	0.118
	Female	6.98	6.19		
Positive symptoms	Male	0.88	1.44	0.140	0.065
	Female	1.38	2.07		
Negative symptoms	Male	0.58	1.63	-0.002	0.978
	Female	0.58	1.20		

Males (n=91) Females (n=85) Total number of participants (N=176)

Results from Lehman's Quality of life Interview (QOLI)

In this section, the results obtained from QOLI were presented. Objective indicators were presented first, followed by the subjective satisfaction in the life domains of the scale. Table 5 showed the kinds of daily activities that the participants were engaged in. The majority of participants read (77.8%), and went for walks (74.4%). Many of them also did grocery shopping (59.5%) or spent time on their hobbies (51.7%). On the other hand, participants rarely engaged in activities such as dining out in restaurants or go for rides in cars or buses. The participants also seldom participated in exercises or went to the park.

Table 6 showed the different kinds of daily activities that the male and female participants were engaged in. Males participated more in going for a walk, go shopping, dining out in restaurants, doing exercise and travelling than the females, whereas females worked on hobby or went to the park more often. However, the differences were not significant.

The amount of family contact of the participants was shown in Table 7. Most of them (56.3%) had daily contact with their families. Quite a large number of participants reported having contact with their family either by phone (41.5%) or meeting with them (26.7%) at least once a month. Only few of them (1.7%) did not have family nor did not contact family members at all.

Table 5

Daily Activities

Activity	Yes		No	
	n	%	n	%
Read	137	77.8	39	22.2
Go for a walk	131	74.4	45	25.6
Go shopping	105	59.7	71	40.3
Work on hobby	91	51.7	85	48.3
Dine out in restaurants	79	44.9	97	55.1
Go for rides in cars or buses	78	44.3	98	55.7
Exercise	69	39.2	107	60.8
Go to the park	67	38.1	109	61.9
Total number of participants (N=176)				

Table 6

Comparison of engagement in daily activities between males and females

Activity	Gender	n	%	t	p
Read	Male	68	74.7	1.055	0.306
	Female	69	81.2		
Go for a walk	Male	69	75.8	0.190	0.663
	Female	62	72.9		
Go shopping	Male	60	65.9	3.102	0.080
	Female	45	52.9		
Work on hobby	Male	42	46.2	2.329	0.129
	Female	49	57.6		
Dine out in restaurants	Male	41	45.1	0.002	0.963
	Female	38	44.7		
Go for rides in cars or buses	Male	41	45.1	0.041	0.840
	Female	37	43.5		
Exercise	Male	36	39.6	0.010	0.921
	Female	33	38.8		
Go to the park	Male	32	35.2	0.669	0.415
	Female	35	41.2		
Total number of participants (N=176)					

Table 7

Contact with family

Frequency	How often talk on telephone		How often meet with families	
	n	%	n	%
At least daily	65	36.9	99	56.3
At least weekly	47	26.7	23	13.1
At least monthly	26	14.8	24	13.6
Less than once a month	14	8.0	21	11.9
Not at all	9	5.1	3	1.7
No family	3	1.7	3	1.7
No answer	12	6.8	3	1.7
Total number of participants (N=176)				

Table 8 presented the amount of social contact the participants had with others. A large proportion of participants reported not visiting someone (33%) or visiting with someone once a month (45.5%). Their amount of social function was limited. Nearly half of the participants attended social functions less than once in a month. It also showed that the majority of participants maintained contact with their friends with the use of telephone. 62.5% reported telephoning someone at least once a week and 21% less than once in a month. It was also noted that a large proportion of participants (54.5%) reported no close friends at all or had not spent any time with a close friend.

When comparing male and female participants, that there were significant differences in the frequency of visit with friends ($t=3.77$, $p=0.05$) and frequency of social functions ($t=6.75$, $p=0.01$) (Table 9). The males were socially more active and maintained more frequent social contacts than the females.

Table 8

Social Relationships

Frequency	Visit with someone		Telephone someone		Attend social function		Spend time with close friend	
	n	%	n	%	n	%	n	%
At least once a week	38	21.6	110	62.5	48	27.3	35	19.9
Less than once in a month	80	45.5	37	21.0	81	46.0	45	25.6
Never or no friends	58	33.0	29	16.5	47	26.7	96	54.5
Total number of participants (N=176)								

Table 9

Comparison of frequency of social contact between males and females

			n	%	t	p
Visit someone	At least once a week	Male	26	28.6	3.77	0.05
		Female	12	14.1		
	Less than once in a month	Male	38	41.8		
		Female	42	49.4		
	Never	Male	27	29.7		
		Female	31	36.5		
Telephone someone	At least once a week	Male	62	68.1	1.99	0.16
		Female	48	56.5		
	Less than once in a month	Male	16	17.6		
		Female	21	24.7		
	Never	Male	13	14.3		
		Female	16	18.8		
Social function	At least once a week	Male	33	36.3	6.75	0.01
		Female	15	17.6		
	Less than once in a month	Male	38	41.8		
		Female	43	50.6		
	Never	Male	20	22		
		Female	27	31.8		
Spend time with close friend	At least once a week	Male	21	23.1	0.45	0.50
		Female	14	16.5		
	Less than once in a month	Male	21	23.1		
		Female	24	28.2		
	Never	Male	21	23.1		
		Female	24	28.2		

Table 10 showed the participants' perceptions of whether they had enough money to cover expenses on food, transport, housing, clothing and social activities. The majority of them were able to provide for their needs of food and transport. However, 52.8% of participants reported not enough money for social activities.

Table 10

Enough money to cover expenses

Expense	Yes		No	
	n	%	n	%
Food	141	80.1	35	19.9
Transport	119	67.6	57	32.4
Housing	102	58.0	74	42.0
Clothing	98	55.7	78	44.3
Social Activities	83	47.2	93	52.8
Total number of participants (N=176)				

Table 11 reported data on whether or not the participants had been victims of nonviolent or violent crimes in the past year. The majority of them were not victims of violent crimes (95.5%) nor nonviolent crimes (83.5%) in the past year.

Table 11

Victims of Crimes

	Yes		No	
	n	%	n	%
Violent Crimes	8	4.5	168	95.5
Non-violent crimes	29	16.5	147	83.5
Total number of participants (N=176)				

Participants were asked to rate their life satisfaction on a 7-point Likert scale. The highest rating was 7 and the lowest was 1. The higher the rating, the more satisfaction was with life. Participants were asked about their global satisfaction with life as a whole at both the beginning and the end of the QOLI. Their responses were consistent in the two questions (Table 12). Significant correlation was found in the mean ratings of these two questions. Mean scores to question 1 and 10 were 4.49 and 4.28 respectively.

Table 12

Global Life Satisfaction – Question 1 of QOLI & Question 10 of QOLI

	Mean	SD	r	p
Question 1	4.49	1.71	0.608	0.000
Question 10	4.28	1.78		

Table 13 showed that gender, age and attending day hospital of the participants had significant effect on the rating of global life satisfaction. Females reported lower global life satisfaction. Participants who aged between 46 to 55 and those who were not attending day hospital reported lower global life satisfaction.

Table 13

Global Life Satisfaction of participants with different characteristics

		Mean	SD	F	p
Gender	Male	4.63	1.73	7.224	0.008
	Female	3.91	1.77		
Age	<25	5.13	1.87	2.785	0.028
	26-35	4.02	1.87		
	36-45	4.43	1.58		
	46-55	3.71	1.74		
	56-65	4.80	1.47		
Day hospital	Yes	5.14	2.10	8.334	0.004
	No	4.12	1.67		

Table 14 showed the rating of each item in the eight domains. Most ratings were above average. The highest rating was the chance of further living in their current accommodation (mean=4.94, SD=2.22). The second highest rating was family interaction (mean=4.92, SD=1.79). The lowest rating was the satisfaction with the amount of money for leisure and entertainment (mean=3.57, SD=2.07).

Table 14

Mean scores of the items in life domains in QOLI

Life Domain	Satisfaction with	Mean	SD
Family relationships	Family interactions	4.92	1.79
	Family relationships	4.8	1.94
Legal and safety issues	How Safe You Are in Neighbourhood	4.86	1.82
	How Safe You Are At Home	4.84	1.98
	Protection Against Being Robbed or Attacked	4.53	2.07
Living condition	The chance of further living there	4.94	2.22
	Living arrangement	4.69	2.06
	Privacy	4.49	2.27
Social relations	Time spent with others	4.26	1.72
	Friends they met	4.14	1.92
Work	Job	4.36	1.88
	Working environment	4.24	1.84
	Amount of pay	4.08	1.80
Health	Health in general	4.09	1.90
	Psychological Well-being	4.03	1.98
	Physical Well-being	3.99	1.81
Daily activities and functioning	Chance to enjoy pleasant things	4.16	1.93
	Amount of relaxation	3.89	1.83
	The way of spending leisure time	3.85	2.04
	Amount of fun	3.80	1.79
Finances	Amount of money	3.98	2.10
	How comfortable financially	3.89	2.05
	Amount of money for entertainment	3.57	2.07

Participants' overall satisfaction with their QOL was illustrated in Table 15, which showed the mean scores in eight different life domains in the QOLI. The maximum and minimum rating of each domain was 7 and 1 respectively. As judged by the mean satisfaction values, the average satisfaction of the participants for all life domains and the view of their overall QOL seemed to be high. The highest ranked life domains was family relations (mean=4.86, SD=1.87). Legal and safety, living situation, social relations, work and health that rated above 4 followed it. The least satisfying domains were daily activities and functioning (mean=3.93, SD=1.91) and financial situation (mean=3.82, SD=2.08).

Table 15

QOLI scores in ascending order for different life domains

Life Domains	Mean Score	S.D.
Family Relations	4.86	1.87
Legal and Safety	4.74	1.97
Living Situation	4.64	2.26
Social Relations	4.30	1.85
Work	4.22	1.82
Health	4.04	1.90
Daily Activities	3.93	1.91
Finances	3.82	2.08

Table 16 showed that statistical significant correlation was found between the satisfaction scores and objective life conditions in most life domains. Reading and doing exercise was related to more satisfaction with daily activities and functioning. Increased frequency of family and social contacts was related to more satisfaction with family and

social relationships respectively. Better financial status and being employed was related to better subjective QOL. A negative correlation between the number of hours worked per week with satisfaction in the work domain was found. Monthly salary was not correlated to satisfaction with work domain. The negative correlation in the access to legal services showed that the more frequent contact with legal service was related to lower satisfaction in the safety domain.

Table 16

Correlation between satisfaction indicators and objective indicators in QOLI

Subjective Indicators	Objective Indicators	r	p
Daily activities & functioning	Reading	0.379	0.000
	Doing exercise	0.252	0.001
	Strolling	0.110	0.145.
	Shopping	0.046	0.543.
	Dining out	0.097	0.202.
	Travelling	0.076	0.314.
	Spending time on hobbies	0.072	0.342
	Going to the parks	0.050	0.507
Family relations	Frequency of phone contacts	0.237	0.002
	Total contacts	0.255	0.001
Social relations	Frequency of phone contacts	0.370	0.000
	Total contacts	0.331	0.000
Finances	Money received per month	0.363	0.000
	Total expenditure per month	0.226	0.003
Work	Currently employed	0.988	0.000
	Number of hours worked per week	-0.283	0.015
	Monthly salary	-0.144	0.227
Legal and safety	Access to legal services	-0.273	0.000
	Been victimized in violent crimes	0.225	0.003
	Been victimized in non-violent crimes	0.308	0.000

Results from WHOQOL Scale

Ratings of the participants in this study on WHOQOL scale were shown in Table 17. The overall ratings of the participants were the greatest in the physical health domain. They were less satisfied with environmental and social relationships domains. Simultaneously, they were the least satisfied with psychological health domain.

The mean and SD of each item in the scale was illustrated in Table 18. The five items that had the lowest ratings were sexual activity (mean=2.6, SD=1.03), physical environment (mean=2.69, SD=1.16), financial resources (mean=2.72, SD=1.26), overall health (mean=2.73, SD=1.05) and life enjoyment (mean=2.78, SD=1.2). On the other hand, the five items that had the highest ratings were mobility (mean=4.34, SD=0.92), social support (mean=3.53, SD=1.02), health and social care (mean=3.53, SD=0.79), transport (mean=3.44, SD=0.87) and activities of daily living (mean=3.41, SD=1.05).

Table 17

Mean satisfaction value in WHOQOL Scale

WHOQOL Domains	Mean	SD
Physical health	13.05	2.63
Environmental	12.42	2.44
Social relationships	12.41	2.78
Psychological	12.09	2.82

Table 18

Mean scores in WHOQOL items

WHOQOL Domains	Items	Mean	S.D
Overall	Overall quality of life	3.07	1.01
	Overall health	2.73	1.05
Physical	Mobility	4.34	0.92
	Activities of daily living	3.41	1.05
	Sleep & Rest	3.05	1.24
	Working capacity	2.99	1.14
	Pain & Discomfort	2.99	1.24
	Energy & Fatigue	2.95	1.27
	Dependence on medical aids	2.91	1.23
Psychological	Eating	3.41	1.23
	Bodily image & Appearance	3.39	1.08
	Negative feelings	3.13	0.80
	Being respected & accepted	3.06	1.13
	Self-esteem	3.03	1.14
	Meaningfulness of life	2.84	1.25
	Concentration & Thinking	2.83	1.34
	Life enjoyment	2.78	1.20
Social Relationships	Social support	3.53	1.02
	Personal relationships	3.18	1.07
	Sexual activity	2.60	1.03
Environment	Health & social care	3.53	0.79
	Transport	3.44	0.87
	Opportunities for acquiring new information	3.31	0.96
	Home environment	3.15	1.17
	Personal safety & Security	3.08	1.35
	Recreational & Leisure activity	2.93	1.10
	Financial resources	2.72	1.26
	Physical environment e.g. pollution, noise	2.69	1.16

Different perception of QOL in different groups

Further analyses were performed to investigate the magnitude of the relationships between sociodemographic factors, clinical variables and utilization of services with QOL. The results were presented as follows.

Difference in perception of QOL between different gender

Items that had significant differences in the subjective QOL ratings in QOLI and WHOQOL between males and females were presented in Table 19 and 20 respectively. Table 19 showed that females had poorer subjective global QOL than the males. They felt less satisfied with their psychological health, current residence, overall health and chance of enjoyment pleasant things in life than the males. From the results of the WHOQOL in Table 20, females had lower ratings in satisfaction with life enjoyment, participation for recreation and leisure, personal and environmental safety than males.

Table 19

Gender difference in perception of QOL in QOLI

Satisfaction in QOLI		Mean	SD	t	p
Global QOL	Male	4.13	1.61	2.23	0.027
	Female	4.02	1.42		
Overall health	Male	4.42	1.88	2.34	0.020
	Female	3.75	1.88		
Psychological health	Male	4.42	1.94	2.69	0.008
	Female	3.62	1.96		
Chance of further living in current residence	Male	5.34	1.98	2.48	0.014
	Female	4.51	2.40		
Chance of enjoyment pleasant things	Male	4.46	1.67	2.17	0.031
	Female	3.84	2.00		

Table 20

Gender difference in perception of QOL in WHOQOL

Satisfaction in WHOQOL		Mean	SD	t	p
Life enjoyment	Male	3.00	1.18	2.57	0.011
	Female	2.54	1.18		
Participation for recreation and leisure	Male	3.11	1.05	2.33	0.021
	Female	2.73	1.12		
Personal and environmental safety	Male	3.27	1.33	2.00	0.047
	Female	2.87	1.34		

Difference in perception of QOL among different age ranges

There were significant differences in the ratings of subjective QOL indicators among the participants with different age ranges. Table 21 and 22 showed that those 46-55 years old participants had the lowest satisfaction with QOL in QOLI and WHOQOL as compared with the other age groups. Table 21 showed that in QOLI, this age group was specifically most dissatisfied with the amount of money for entertainment (mean=3.00, SD=1.68), the chance of enjoying pleasant things (mean=3.21, SD=1.97), the things do with others (mean=3.21, SD=1.91), the friends who met (mean=2.89, SD=1.85) and the time spent with others (mean=3.18, SD=1.98). Apparently, they were dissatisfied with the social relationships domain as they had the lowest ratings in all items that were included in this social relationships domain.

Table 22 showed that in the WHOQOL scale, this age group had the lowest satisfaction with the meaningfulness of life (mean=2.21, SD=1.67), finances (mean=2.29, SD=1.15), eating (mean=2.75, SD=1.75), physical environment (mean=3.00, SD=1.68), being respected and accepted (mean=3.00, SD=1.68) and concentration and thinking (mean=3.21, SD=1.97). In summary, those 46-55 years old participants were those who had the poorest perception of QOL especially in finance, social relationships and leisure when compared with the participants of other age groups.

Table 21

Age difference in perception of QOL in QOLI

Satisfaction in QOLI	Age	Mean	SD	F	p
Privacy at home	<25	5.74	1.96	5.58	0.000
	26-35	3.90	2.17		
	36-45	3.98	2.41		
	46-55	5.25	1.96		
	56-65	5.80	1.62		
Chance of enjoying pleasant things	<25	4.87	1.74	5.49	0.000
	26-35	3.52	1.79		
	36-45	4.28	1.61		
	46-55	3.21	1.97		
	56-65	3.80	2.04		
Things do with others	<25	3.83	1.44	7.31	0.000
	26-35	4.53	1.80		
	36-45	4.32	1.71		
	46-55	3.36	2.04		
	56-65	5.60	1.65		
Friends who met	<25	4.09	2.37	4.05	0.004
	26-35	4.53	1,80		
	36-45	4.30	1.59		
	46-55	2.89	1.85		
	56-65	4.50	1.22		
Time spent with others	<25	4.83	1.59	3.90	0.005
	26-35	4.40	1.64		
	36-45	4.34	1.63		
	46-55	3.18	1.98		
	56-65	4.70	1.25		
Psychological health	<25	4.35	2.60	3.37	0.011
	26-35	4.21	1.97		
	36-45	4.40	1.60		
	46-55	3.21	1.95		
	56-65	2.60	1.55		
Amount of money for entertainment	<25	4.65	2.40	2.99	0.020
	26-35	3.60	1.86		
	36-45	3.23	2.09		
	46-55	3.00	1.68		
	56-65	4.40	2.63		
Physical health	<25	4.43	2.21	2.50	0.045
	26-35	4.05	1.81		
	36-45	4.26	1.47		
	46-55	3.43	1.91		
	56-65	2.80	1.62		

Table 22

Age difference in perception of QOL in WHOQOL

Satisfaction in WHOQOL	Age	Mean	SD	F	p
Meaningfulness of life	<25	3.35	1.33	4.65	0.001
	26-35	2.65	1.28		
	36-45	3.02	1.07		
	46-55	2.21	1.67		
	56-65	3.60	1.07		
Interpersonal relationships	<25	3.30	1.02	4.71	0.001
	26-35	3.02	1.02		
	36-45	2.94	1.13		
	46-55	3.46	0.96		
	56-65	4.30	0.48		
Being respected and accepted	<25	4.65	2.40	3.941	0.004
	26-35	3.60	1.86		
	36-45	3.23	2.09		
	46-55	3.00	1.68		
	56-65	4.40	2.63		
Physical environment	<25	4.65	2.40	3.55	0.008
	26-35	3.60	1.86		
	36-45	3.23	2.09		
	46-55	3.00	1.68		
	56-65	4.40	2.63		
Opportunities of acquiring new information	<25	3.83	1.03	2.95	0.022
	26-35	3.26	0.69		
	36-45	3.34	0.99		
	46-55	2.93	1.15		
	56-65	3.30	1.06		
Self-esteem	<25	3.09	1.12	2.95	0.022
	26-35	2.69	1.15		
	36-45	3.26	1.17		
	46-55	3.39	1.03		
	56-65	2.70	0.67		
Financial resources	<25	3.04	1.29	2.66	0.034
	26-35	3.00	1.22		
	36-45	2.45	1.29		
	46-55	2.29	1.15		
	56-65	2.80	1.13		
Concentration and thinking	<25	4.87	1.74	2.55	0.041
	26-35	3.52	1.79		
	36-45	4.28	1.61		
	46-55	3.21	1.97		
	56-65	3.80	2.04		
Eating	<25	3.57	1.27	3.25	0.013
	26-35	3.71	1.30		
	36-45	3.38	0.99		
	46-55	2.75	1.35		
	56-65	3.20	1.03		

Relationship between employment status and perception of QOL.

Table 23 and 24 showed the items that have significant differences between employed and unemployed groups in both instruments. Results from both scales were consistent. In the QOLI, those unemployed clients have a significant lower rating than those employed in the satisfaction with overall well-being, physical and psychological well-being, the ways of spending leisure time, family relationships. In the WHOQOL scale, those unemployed clients had significantly lower ratings with overall health, energy, sleep and rest, self esteem and being respected and accepted, work capacity, meaningfulness of life, life enjoyment, participation and opportunity for recreation/leisure, social support, activities of daily living, personal safety and security. On the other hand, the employed participants rated the higher pain and discomfort than that of the unemployed.

Table 23

Significant differences in life satisfaction in QOLI between employed and unemployed participants

Satisfaction in QOLI		Mean	SD	t	p
Overall well-being	Employed	4.51	1.75	2.57	0.011
	Unemployed	3.78	1.97		
Psychological well-being	Employed	4.66	1.66	3.76	0.000
	Unemployed	3.56	2.09		
Physical well-being	Employed	4.37	1.71	2.42	0.017
	Unemployed	3.71	1.84		
Way of spending leisure time	Employed	4.38	1.89	3.06	0.003
	Unemployed	3.45	2.07		
Family relationships	Employed	5.17	1.68	2.24	0.027
	Unemployed	4.51	2.09		

Table 24

Significant difference in subjective life satisfaction in WHOQOL between employed and unemployed participants

Satisfaction in WHOQOL		Mean	SD	t	p
Overall health	Employed	2.92	1.03	2.08	0.039
	Unemployed	2.59	1.06		
Sleep and rest	Employed	3.33	1.18	2.63	0.009
	Unemployed	2.84	2.25		
Energy	Employed	4.66	1.66	2.36	0.020
	Unemployed	3.56	2.09		
Self-esteem	Employed	3.22	1.03	1.99	0.048
	Unemployed	2.88	1.21		
Being respected and accepted	Employed	3.33	1.06	2.84	0.005
	Unemployed	2.85	1.14		
Work capacity	Employed	3.37	1.02	4.03	0.000
	Unemployed	2.70	1.14		
Meaningfulness of life	Employed	4.51	1.75	2.54	0.012
	Unemployed	3.78	1.97		
Life enjoyment	Employed	5.17	1.68	2.56	0.012
	Unemployed	4.51	2.09		
Participation and opportunity for recreation/leisure	Employed	3.20	0.91	2.92	0.004
	Unemployed	2.72	1.18		
Social support	Employed	3.75	0.95	2.47	0.014
	Unemployed	3.37	1.05		
Activities of daily living	Employed	3.78	0.87	4.13	0.000
	Unemployed	3.14	1.10		
Personal safety and security	Employed	4.37	1.71	2.63	0.009
	Unemployed	3.71	1.84		
Pain and discomfort	Employed	2.55	1.26	-4.34	0.000
	Unemployed	3.33	1.11		

Relationship between mental status and perception of QOL.

As shown in Table 25, the ratings of the participants' mental health status as measured by the BPRS, were significantly and negatively correlated to their perception in QOL in Lehman's QOLI. That means the better the mental status, the better the perception of QOL. It shows that participants with better mental status had higher satisfaction with overall and psychological well-being, social relationships, amount of relaxation in life and ways of spending leisure time.

Table 25

Relationship between total BPRS score and perception of QOL in QOLI

Satisfaction in QOLI	r	p
Overall QOL	-0.194	0.010
Psychological well-being	-0.199	0.008
Time spent with others	-0.297	0.000
Friends who met	-0.162	0.032
Things do with others	-0.258	0.001
Amount of relaxation in life	-0.175	0.020
Way of spending leisure time	-0.169	0.025

Table 26 showed that total score of BPRS was significantly and negatively correlated to participants' perception of overall QOL in WHOQOL. A better mental status was also correlated with more satisfaction with overall health, meaningfulness of life, life enjoyment, concentration and thinking, sleep and rest and energy, personal safety and security, Results were consistent with those from QOLI.

Table 26

Relationship between mental state and perception of QOL in WHOQOL

Satisfaction in WHOQOL	r	p
Overall QOL	-0.155	0.040
Overall health	-0.263	0.000
Meaningfulness of life	-0.265	0.000
Life enjoyment	-0.212	0.005
Concentration and thinking	-0.252	0.001
Sleep and rest	-0.230	0.002
Energy	-0.180	0.017
Personal safety and security	-0.464	0.000

Table 27 and 28 presented the relationships between perception of QOL and severity of both negative and positive symptoms. As shown in Table 27, significantly negative correlations were found between negative symptoms severity and satisfaction with things do with others, interpersonal relationships, participation and opportunity for recreation or leisure, personal safety and security, energy, concentration and thinking. Similarly, there were negative correlations between positive symptom severity and QOL

satisfaction as shown in Table 28. With more severe positive symptoms, satisfaction with money for entertainment, personal safety and security, financial resources, social support and opportunity of acquiring new information was lower.

Table 27

Relationship between negative symptoms and perception of QOL

	Satisfaction with	r	p
QOLI	Things do with others	-0.153	0.043
WHOQOL	Interpersonal relationships	-0.168	0.026
	Participation and opportunity for recreation/leisure	-0.173	0.022
	Energy	-0.264	0.000
	Concentration and thinking	-0.210	0.005
	Personal safety and security	-0.278	0.000

Table 28

Relationship between positive symptoms and perception of QOL

	Satisfaction with	r	p
QOLI	Amount of money for entertainment	-0.173	0.037
WHOQOL	Personal safety and security	-0.288	0.000
	Financial resources	-0.152	0.044
	Social support	-0.149	0.048
	Opportunities of acquiring new information	-0.148	0.049

Relationships between years of onset of mental illness and perception of QOL.

No significant difference was found between the years of onset of mental illness and perception of QOL in QOLI. However, 5 questions in WHOQOL scale had significant correlation between years of onset of mental illness and perception of QOL. As shown in Table 29, the longer the duration of illness, the more satisfied with activities of daily living, work capacity and personal relationships. But the reverse relationship was found in satisfaction with home environment and the use of transport.

Table 29

Relationship between years of onset and perception of QOL

Satisfaction in WHOQOL	r	p
Activities of daily living	0.178	0.018
Work capacity	0.182	0.016
Personal relationships	0.166	0.028
Home environment	-0.171	0.023
Transport	-0.224	0.003

Relationship between number of hospitalization and one's QOL.

Table 30 and 31 presented the satisfaction with life domains that had significant relationships with the participants' number of previous hospitalization. In the QOLI, the number of previous hospitalization was negatively related to participants' global QOL and satisfaction with personal safety and security and family interaction. In the

WHOQOL, it showed that number of previous hospitalization was significantly and negatively related to satisfaction with overall QOL, overall health, personal safety and security, physical environment, use of transport, meaningfulness in life and life enjoyment. The more the number of hospitalization, the poorer the QOL.

Table 30

Relationship between number of hospitalization and QOL indicators in QOLI

Satisfaction in QOLI	r	p
Global QOL	-0.155	0.040
Safety at home	-0.240	0.001
Safety in neighbourhood	-0.170	0.024
Family interaction	-0.174	0.022

Table 31

Relationship between number of hospitalization and QOL in WHOQOL

Satisfaction in WHOQOL	r	p
Overall QOL	-0.165	0.028
Overall health	-0.015	0.042
Personal safety and security	-0.290	0.000
Physical environment	-0.150	0.047
Use of transport	-0.198	0.008
Meaningfulness of life	-0.247	0.001
Life enjoyment	-0.181	0.016

Relationships between CPNS and perception of QOL.

Table 32 and 33 showed the items that have significant differences between the two groups in subjective indicators in QOLI and WHOQOL respectively. Results showed that CPNS recipients were more satisfied with their ways of spending leisure, family interaction, time spent with others, friends who met, amount of protection, social support than those who did not receive CPNS. However, they were more dissatisfied with their having to depend on medication and treatment when than those non-recipients.

Table 32

Significant difference in subjective life satisfaction in QOLI between CPNS and non-CPNS recipients

Satisfaction in QOLI		Mean	SD	t	p
Friends who met	CPNS	5.02	1.42	4.157	0.000
	No CPNS	3.76	1.98		
Ways of spending leisure	CPNS	4.55	1.91	3.027	0.003
	No CPNS	3.55	2.04		
Amount of protection	CPNS	5.23	2.13	2.990	0.003
	No CPNS	4.23	1.98		
Time spent with others	CPNS	4.70	1.85	2.227	0.027
	No CPNS	4.07	1.65		
Family interaction	CPNS	5.36	1.78	2.148	0.033
	No CPNS	4.73	1.77		

Table 33

Significant difference in subjective life satisfaction in WHOQOL between CPNS and non-CPNS recipients

Satisfaction in WHOQOL		Mean	SD	t	p
Dependence on medication and treatment	CPNS	2.62	1.24	-2.092	0.038
	No CPNS	3.04	1.20		
Social support	CPNS	3.77	1.12	2.054	0.041
	No CPNS	3.43	0.97		

Relationships between attending DH and perception of QOL.

Table 34 and 35 showed the items that have significant differences between the two groups in QOLI and WHOQOL. Results illustrated that the DH attendants were more satisfied with their global QOL, psychological well-being, friends who met, family interaction, amount of fun in life, chance of enjoying pleasant things and ways of spending leisure. Besides, they were more satisfied with social support, sleep and rest and energy.

Table 34

Relationship between attending DH and perception of QOL in QOLI

Satisfaction in QOLI		Mean	SD	t	p
Global QOL	Attendant	5.14	2.10	2.887	0.004
	Not attending	4.12	1.67		
Psychological well-being	Attendant	5.17	2.02	3.479	0.001
	Not attending	3.81	1.91		
Friends who met	Attendant	4.83	1.44	2.124	0.035
	Not attending	4.01	1.98		
Family interaction	Attendant	5.82	1.70	2.957	0.004
	Not attending	4.75	1.77		
Amount of fun in life	Attendant	4.55	1.82	2.482	0.014
	Not attending	3.66	1.76		
Chance of enjoying pleasant things	Attendant	4.93	1.96	2.385	0.018
	Not attending	4.01	1.89		
Ways of spending leisure	Attendant	4.59	1.97	0.941	0.034
	Not attending	3.71	2.03		

Table 35

Relationship between attending DH and perception of QOL in WHOQOL

Satisfaction in WHOQOL		Mean	SD	t	p
Social support	Attendant	3.97	1.05	2.52	0.013
	Not attending	3.45	1.00		
Sleep and rest	Attendant	3.51	1.30	2.234	0.027
	Not attending	2.96	1.22		
Energy	Attendant	3.38	1.05	1.982	0.049
	Not attending	2.87	1.30		

Predictors of QOL

Regression analysis was carried out to understand whether independent variables of sociodemographic characteristics and clinical variables help to predict QOL of the participants in this study. The sociodemographic characteristics included gender, age, marital status, educational level and employment status. The clinical variables included the years of onset of mental illness, number of hospitalization, total BPRS scores as well as the negative and positive symptom scores.

The independent variables were entered into the regression equation. The dependent variable was the total scores in the WHOQOL scale. It was chosen as dependent variable because it produced the sum of satisfaction scores in all life domains. As shown in table 36, only two of the eight independent variables made significant contributions to predicting the variance in the QOL perceived by the participants. Participants' mental state as assessed by the total BPRS score had significant negative value and current employment status had significant positive value in predicting the total WHOQOL score. They explained 11.7% of the variance in participants' total WHOQOL score. Conclusions were reached based on the sign associated with the regression coefficients or Beta. A negative sign for total BPRS indicated that the higher the value label, i.e. poorer mental status results in lower predicted scores on the WHOQOL scale. For employment status, the higher the positive sign represented those employed participants. The positive sign indicated that participants who were employed would have greater satisfaction in QOL. Gender, age, educational level, employment status, years of onset, number of hospitalizations and recipients of CPNS had no significant contribution to predicting satisfaction in the WHOQOL scale.

Table 36

Results of standard multiple regression of factors affecting the satisfaction rating in WHOQOL score

Independent variables	df	Beta	R-square	F	p
Employment status	2, 173	0.241	0.117	11.43	0.001
Total BPRS		-0.209			0.004

Table 37 showed the regression analysis of the prediction of the total scores in the WHOQOL physical well-being domain. Again, only two of the eight independent variables made significant contributions to predicting the variance in the physical well-being domain perceived by the participants. Participants' current employment status and their educational level had significant value in predicting the total WHOQOL score. Participants who were employed and had higher educational level would report greater satisfaction in physical well-being in the WHOQOL.

Table 37

Results of standard multiple regression of factors affecting the satisfaction rating in WHOQOL physical domain score

Independent variables	df	Beta	R-square	F	p
Employment status	2, 173	0.38	0.163	16.86	0.00
Education		0.16			0.02

Table 38 showed the regression analysis of the prediction of the total scores in the WHOQOL psychological well-being domain. Again, participants who were employed and had better mental state would have greater satisfaction in psychological well-being in the WHOQOL.

Table 38

Results of standard multiple regression of factors affecting the satisfaction rating in WHOQOL psychological domain score

Independent variables	df	Beta	R-square	F	p
Total BPRS	2, 173	-0.197	0.08	7.57	0.008
Employment status		0.177			0.017

Table 39 showed the regression analysis of the prediction of the total scores in the WHOQOL social well-being domain. Participants who experienced more numbers of previous psychiatric hospitalizations and who were unemployed would report lower satisfaction in social well-being in the WHOQOL.

Table 39

Results of standard multiple regression of factors affecting the satisfaction rating in WHOQOL social well-being domain score

Independent variables	df	Beta	R-square	F	p
No, of hospitalizations	2, 173	-0.15	0.05	4.52	0.040
Employment status		0.15			0.046

Table 40 showed the regression analysis of the prediction of the total scores in the WHOQOL environmental domain. Results showed that mental state was the most predictive of the satisfaction with environmental domain. Participants who had better mental state would report more satisfaction towards this domain.

Table 40

Results of standard multiple regression of factors affecting the satisfaction rating in WHOQOL environmental domain score

Independent variables	df	Beta	R-square	F	p
Total BPRS	1, 175	-0.217	0.047	8.62	0.004

Therefore, the hypothesis in this study was only partly supported. Only mental status and employment were found to be predictors of QOL. Besides, the number of hospitalization with employment status predicted the social well-being.

Summary

This chapter presented the findings of this study. Participants were mostly in the young and middle adulthood and most of them were unmarried. The majority of them lived with family and they were satisfied with their family relationships. The participants were generally stable in their mental state and relatively free of negative symptoms. Objectively, they had limited social life and low income and largely unemployed. However, their satisfaction of overall QOL was generally high. Those participants, whose age ranged from 46 to 55, unemployed and had poorer mental condition, indicated lower QOL ratings. In addition, there were life aspects in which the participants were comparatively dissatisfied, which included daily activities, social relationships and financial situation. The multiple regression analyses indicated that participants' mental state and employment status could predict their perception of QOL.

CHAPTER FIVE

DISCUSSION

Introduction

In this chapter, results of this study will be discussed with support from the literature and previous research. Relationships among sociodemographic factors, clinical variables and QOL will be addressed. This chapter will also illustrate the results in relation to the conceptual of the study.

Sociodemographic and clinical characteristics of the participants

The participants in this study were recruited from the attendants of an OPD in the Kowloon Central district. They were mostly 26-35 years old, single, living with family and had educated up to secondary level. According to the Hong Kong statistics, there was 63.1% of the general population who were never married (Census and Statistics Department, 2001). The proportion of participants in this study who were never married (48.9%) was comparatively smaller. However, the percentage of participants who were divorced (20.5%) was much higher than that of the general population (3.8%). The public policy in Hong Kong that stipulated 9-year free and compulsory education in Hong Kong since September 1978 might account for the fact that most participants had attained an education up to secondary level.

According to the latest labour force statistics, the seasonally adjusted unemployment rate was 4.6% in February-April 2001 (Census and Statistics Department, 2001). The unemployment rate of the participants in this study was 56.8%, which was much higher than that of the general population. It was consistent with the findings in UK that employment in persistently mentally ill clients was higher than that in the general populations (Oliver et al., 1996). Persistently mentally ill clients usually had repeated hospitalizations or suffered from psychotic symptoms (Loebel, Lieberman, Alvir, Mayerhoff, Geisler, & Szymanski, 1992; McGlashan & Johannessen, 1996). They may have many difficulties in adjusting to a normal work life. Besides, negative symptoms such as their lack of interest, motivation, energy and interpersonal skills, could prevent clients from being able to hold a job. In particular, many clients with schizophrenia had to tolerate disabling and distressing extrapyramidal side effects of psychotropic medication such as parkinsonism, akathisia (restlessness in the legs and body), acute dystonia, and tardive dyskinesia (involuntary movements, often of the tongue and face but also of the fingers, hands, legs, and trunk). These undesirable side effects could limit their work capacity and hindered their ability to maintain work performance. Social stigma towards mental illness might further minimize their chance of entering into the workforce (Bachrach, 1998, Davidson et al., 1996). Consequently, the persistently mentally ill clients were mostly unemployed.

For those who were employed (43 males and 33 females) in this study, almost half of them worked in sheltered workshops or voluntary agencies (47.4%), which were assisted employment. The other occupations that recruited these participants were mainly manual or technical jobs (18.4%) and clerical posts (18.4%) which did not require a lot of skills. Their monthly salary was relatively low, just about $3000 for

more than half of the working participants. Most of the others earned less than $9000 a month, which was considered low wages in Hong Kong. It reflected the disadvantageous work and financial situation of the participants.

The majority of participants received CSSA (60.8%). The amount of money they received and consumed per month was mostly less than $3000. Most of the participants were living below the poverty line. Nevertheless, many participants reported being able to provide themselves for basic needs in most areas such as food (80.1%), transport (67.6%), housing (58%) and clothing (55.7%). The reasons might be that most participants lived with their families where their rent and food were provided.

In fact, as most of them were unemployed and had to depend on CSSA, they did not have much to spend. To keep a tight budget, they spent their money mostly on food and transport. It might account for the reason that they considered money was inadequate for social activities. The scanty amount of money limited their participation in entertainment and social activities. It might be the cause of low subjective rating of satisfaction related to social activities among most of the participants. The ill-effects of such lack of social activities might lead to further social isolation and deterioration in interpersonal and social functioning of the clients.

The problem that schizophrenic clients had frequent relapse and rehospitalization was frequently mentioned in literature (Breier, Schreiber, Dyer, & Pickar, 1991; Carone, Harrow, & Westermeyer, 1991). Most of the participants in this study had been hospitalized in a psychiatric hospital. More than half of them had been hospitalized for one to three times. The rest of them even had multiple psychiatric hospitalization with up to 20 times. There was evidence that after each relapse, some clients had difficulty in

returning to their previous level of functioning (Wyatt, 1997). It might lower their QOL too. It appeared that relapse prevention and reduced rate of rehopsitalization were needed in order to help the mentally ill clients to improve their QOL.

Reasons for relapse were multiple, such as loss of medication efficacy and medication noncompliance (Postrado & Lehman, 1995; Wyatt, 1997). In this study, almost all participants received oral medication, some of them even required a combination of both oral and depot medication for psychiatric treatment. It appeared that psychiatric treatment in Hong Kong still largely depended on psychotropic medications. However, these psychotropic medications often had unpleasant side-effects such as tremor, rigidity and sedation. Those extrapyramidal side-effects were often socially visible and stigmatizing (Davidhizar, 1985; Katschnig et al., 1997). Clients' reluctance in taking medications could be one of the reasons for their relapse. It was apparent that strategies on maintaining compliance to treatment and mental state were needed. The exploration of newer-generation psychotropic medications that have less side-effects can be one of the strategies to improve clients' compliance to treatment.

The frequent hospitalization might also reflect that community support was inadequate to keep the clients in the community. Despite that the highest score on the BPRS was not high for the participants that meant the participants were not floridly ill and had quite a stable mental state at the time of the interview, they still had the history of multiple admission into the psychiatric hospitals. It implied that factors other than deterioration in mental status could contribute for their readmission. According to Mak (1992), many clients with persistent mental illness had poor self-care, poor money management, poor coping skills and difficulties in finding jobs. There were also

problems of social isolation, stigmatization, unemployment and poverty (Aviram, 1990; Lehman, 1983). With these difficulties, many clients might not be able to sustain their living in the community (Mak, 1992). It seemed that comprehensive care for schizophrenic clients with persistent illness should involve not only drug treatment, but also the provision of on-going support and services to solve clients' multiple needs in the community.

Perception of QOL

The Hong Kong Project Team on the Development of the Hong Kong Chinese version WHOQOL has conducted a study by using the WHOOL-BREF-HK on healthy subjects (Leung et al., 1997). When compared the results of this study with the 155 healthy subjects in WHOQOL Hong Kong study (mean scores ranged from 13.74 to 15.85), the participants in this study showed lower ratings in all domains in the scale (mean scores ranged from 12.09 to 13.05). Satisfaction was the greatest in the physical health domain among both healthy subjects (mean=15.85, SD=2.13) and the participants in this study (mean=13.05, SD=2.63). The participants in this study were less satisfied with environmental (mean=12.42, SD=2.44) and social relationships domains (mean=12.41, SD=2.78) than the healthy subjects (environmental domain: mean=13.74, SD=2.45; social relationships domains: mean=14.26, SD=2.39). The second highest rating of the healthy subjects was the psychological health domain (mean=14.77, SD=2.39), which was ranked the least satisfied among the participants in this study (mean=12.09, SD=2.82). It appeared that schizophrenic clients had relatively poor QOL when compared with the general population in Hong Kong.

Though participants in this study had higher rating in physical domain, the ratings of the items in work capacity, pain and discomfort, energy and fatigue, dependence on medical treatment were still comparatively lower than those ratings obtained from the healthy subjects. It is apparent that although Schizophrenia is a mental illness, it affects clients' physical condition as well. According to DSM-IV, there may be a marked decrease in reactivity to the environment, with a reduction in spontaneous movements and activity in schizophrenic clients. In extreme cases the client appears unaware of the nature of the environment (as in catatonic stupor); may maintain a rigid posture and resist efforts to be moved (as in catatonic rigidity). Abnormalities of psychomotor activity e.g. pacing and rocking are common (American Psychiatric Association, 1994). Besides, although psychotropic medication could help reduce and control the distressing symptoms of the illness, medications often had unpleasant side-effects. These might account for their poor rating in some items of the physical health domain.

Participants in this study had lowest rating in the psychological domain. Within this domain, the lowest rating items were life enjoyment, meaningfulness of life, concentration and thinking. These low ratings might be resulted from the long-lasting, negative symptoms of schizophrenia that often caused the clients to have a high degree of disability in daily activities and functioning. Besides, the dependence on medications and life-long treatments for schizophrenia was distressing to most clients who suffered from the illness. Even when treatment was effective, persisting consequences of the illness such as loss of opportunities, the suffer from stigma, residual symptoms, unemployment and poverty might have great impact on the psychological well-being of the participants.

In this study, QOL indicators were found to be correlated with gender and age. The females in this study did not significantly different from males in the number of previous hospitalizations and BPRS score. Also, the female participants had a significantly shorter duration of mental illness and more educated than the males. However, they had poor perception of their QOL when compared with the males. These females were more dissatisfied with psychological health, physical health, life enjoyment, entertainment, leisure and personal safety. It appeared that there might be greater discrepancy between what the female participants expected and their current condition. The results of this study were different from studies by Lehman (1983) and Shtasel et al (1992) that they found females had better QOL than males.

Possible reasons for the different results with these studies might be related to the cultural difference. According to the Hong Kong Council of Social Service (1999), the services for women were more deliberated and well developed in the U.S. The number and range of programmes for women in Western countries were more diversified. There was a wide range of networks among different women groups, service providers for women and funding bodies. Their link was close and strong. Examples were the setting up of regular informal sharing sessions on various concerned policies and measures related to women as well as a constant updated women service directory, which was compiled with help from volunteers from colleges and voluntary organizations (The Hong Kong Council of Social Service, 1999). On the other hand, there were quite a number of women groups established in Hong Kong but communication among them and their publicity was weak. Besides, Chinese tended to bottle up their feelings and problems that prevent them from actively seeking help from others (Wong, 2000). As a result, the access to supporting network or resources was not common among the

traditional Chinese females in Hong Kong.

Recently, the slowdown of the economy, which had been precipitated by a massive shift of Hong Kong's manufacturing base to China where land and labour was cheaper, had resulted in loss of employment opportunities for Hong Kong citizens. Working-class women were the group most adversely affected by this move. Women in their 40's and 50's with 10-20 years of industrial work experience had been thrust into a service industry where they lacked skills and confidence. According to the survey conducted by the Equal Opportunities Commission in Hong Kong in 1996, females were less competitive than males in recruitment due to their disadvantage position in the labour market. It could be a significant factor contributing to females' high unemployment rate. Furthermore, cutting down on labour cost led to a move on the part of the employer to hire part-time workers, who were largely composed of females. Sex discrimination in the work place was evident in the wages as well. Figures from a recent local statistics showed that females on average earned only 77% of the male dollar. Females, aged 45-49, earned only 58% of what men earned (Equal Opportunities Commission, 1997).

In addition, females in Hong Kong often engaged in dual roles as working and taking care of their family at the same time. Traditional gender roles continued to prevail in the family (Westwood, Mehrain, & Cheung, 1995). The man was the breadwinner and the woman the caregiver, even if both spouses were employed. Men were the decision-makers, women were the home-makers (Westwood et al., 1995). The lack of child-care facilities available also kept women at home with their children, where the women remained economically dependent upon their husbands. Constant routine, isolation, social deprivation, inability to get out and develop social relationships and lack of

income because of family responsibilities, was a great source of frustrations for women (Ward & Spitze, 1998; Westwood et al., 1995). No better was the situation for females entering the job market. As mentioned earlier, the females had to face economic discrimination and job inequity. Much of the work available to them was poorly paid and labour intensive. The combined pressures of conflicting home and work responsibilities on working females could be extremely difficult to cope with.

Simultaneously, maintaining filial piety was identified as a primary duty and cultural expectation for females in traditional Chinese society. The demands of the caregiving role had led to stress (Ward & Spitze, 1998). Very often, the females had to take care of the aged family members as well as their children at home. Childcare was a particularly difficult task for persistently mentally ill women. The sedation that frequently accompanied drug treatment even doubled the burden of females in caring for their children. These explanations might account for the poorly perceived QOL among the female participants in this study.

Findings on age difference in this study were consistent with the results of Browne et al (1996) and Skantze et al (1992) that age was negatively correlated with QOL. Older clients had poorer QOL. In this study, the participants who aged 46-55 had the lowest ratings in most of the QOL indicators. These indicators included social activities, social relations, finances, concentration and thinking, opportunity of acquiring new information, physical environment and being accepted and expected. The oldest age group, 56-65, rated lowest in physical, psychological health and self-esteem. Reasons for the 46-55 age group had poorer QOL might be that society expected this age group to be the most productive and mostly engaged in employment. However, in the adversity

of economic recession, most of clients in this age group lost their jobs and encountered great difficulties in finding other jobs. Besides, clients in this age group had to deal with aging parents or the burden of responsibility for taking care of two generations. Findings showed that majority of participants in this age group were either married or divorced. They might encounter stress in marital and parent-child relationships.

Social relationships

One prominent area of dissatisfaction in this study was the way participants spent leisure time. As reported by the participants, their most common activities for leisure were reading, strolling in the street and grocery shopping. Less than half of them had spent time on going to the parks, dining out in restaurants, travelling or doing exercise. As mentioned earlier, their tight economical situation might limit their ability to participate in other sorts of entertainment.

More than half of the participants was socially isolated to an extreme degree, so that the extent their contacts were with only one to a few other persons. A large number of participants reported no close friends or had not spent time with a close friend at all. Even for those who had contacted their friends, they reported very few visits to friends or experience any kind of social companionship. Their usual way to maintain their friendship was by telephoning only. There might be few reasons account for this. Their mental condition might influence their social relationship. Many schizophrenic clients did not want to be around others and felt uncomfortable around groups of people and tended to withdraw from social situations (American Psychiatric Association, 1994).

Some participants might prefer isolating themselves and spending long periods of time alone. As a result, most of them spent the majority of time alone reading or strolling in the street or at home. Coupled with the problem of poor finance, the participants did not go out to meet new people in the community or attend social functions. Stigmatization might also be one of the obstacles for them to make friends. Therefore, their satisfaction with their way of spending leisure time and having fun in life was at least somewhat restricted.

Consistent with objective indicator, the satisfactory level of participants remained low in social relationships and the amount of entertainment, leisure and recreational activities they had. They were dissatisfied with the time spent with other friends and the friends that they had met. Poor social functioning, including the frequency of social contacts, had repeatedly been found to be an important predictor of relapses and readmission in schizophrenia (Harrison et al., 1996; Jonsson & Nyman, 1991; Rajkumar & Thara, 1989; Strauss & Carpenter, 1977). The need of the participants for assistance in social activities and social skills training to enhance social performance and reduce distress and difficulty experienced during social interaction was apparent. However, the number of places in day hospitals or social clubs for the mentally clients in the Hong Kong community was not adequate to cater for the relatively large number of clients in Hong Kong. For example, there were only three social clubs for mentally ill clients in Hong Kong which were run by non-governmental organizations. The provision of community services in Hong Kong was too far from enough in meeting the social and recreational needs of the clients. Yip (1997) also commented that the Government was not fully committed to the development of community psychiatric rehabilitation services in Hong Kong.

The female participants were socially less active and maintained less frequent social contacts than the males. Besides, the female participants were less involved in the daily activities such as strolling, doing exercise or dining out in restaurants. Traditionally, females are expected to stay at home to take up caring responsibility and domestic work. As mentioned earlier, females usually have to take up multiple roles in family and occupation at the same time, therefore they might not be able to have time to participate in social and recreational activities.

Family relationships

It was lucky that majority of participants was living with their family. The frequency of family contacts of participants was high. Besides, most of them were dependent on family's support and receive financial support from family members. From the results of Lehman QOLI, it showed that the more frequent the contacts with family, the more positive feeling expressed from the participants in family interaction and relationships. In this study, most participants were satisfied with their family relationship. Results also showed that better-perceived family relationships contributed to better QOL. Previous local study showed that the persistently mentally ill clients were not satisfied with their family relationship (Cheung, 1997). However, the subjects of Cheung's study all lived in supervised settings in the community.

Family is a basic and the most important resource for support and comfort in resolving problems, especially in Chinese culture, which places great value on the family. Chinese tend to have strong feelings and bonding for their family members. It

might account for the reason that many participants lived with their family. It was also apparent that, with deinstitutionalisation, families had become the primary caregivers of clients with mental illness.

Although family was an important source of support for the mentally ill clients and had to be involved in the treatment plan, the high expressed emotion family members might have harmful effects on clients. Besides, the clients' behavioural problems, financial obligations and social stigma of mental illness were difficult for families to manage (Francell, Conn, & Gray, 1988; Maurin & Boyd, 1990; Parker, 1993; Phelan, Bromet & Link, 1998). As a result, families might become overwhelmed and frustrated in the long-term care of their persistently mentally ill relatives.

To maintain the family and to reduce carers' burden, mental health professionals and family members must work together to prevent damage to the most valuable resource, the family. It appeared that further strengthening family support by involving and supporting family members in the rehabilitation plan was necessary. The family members might also need easily available and accessible professional help, even respite care. Besides, peer support groups for families could be introduced and held regularly to provide family members the opportunity to share their feelings and experiences about the caregiver role and its related stress. It could reduce the level of burden and stress of the family members in caring of the clients. It could, in turn, strengthen their caring relationships and communication with the clients. Ultimately, better QOL of the clients could be ensured.

Sexual relationships

Sexual activity was the item that had the lowest rating in WHOQOL among the participants. There was no significant difference in satisfaction with sexuality between male and female participants. Clients with schizophrenia might have difficulty making and keeping friends or acquaintances. Some of the clients might have a poor self-esteem and self-image. It might be difficult for them to develop intimate relationships with the opposite sex as well. It might be the reason for the majority of the participants were single and never married. As previously mentioned, stigmatization might limit their social circle. There was also side-effect of psychotropic medication such as decrease of sexual drive or causing impotence in males. These were all factors that might account for their dissatisfaction with sexual activity. Enriching clients' social life and encouraging making of friends is necessary. It is helpful to increasing clients' confidence and competence in social interaction through social skills training. Besides, problems with the undesirable side-effects of psychotropic medication have to be addressed.

Environment

Participants were satisfied with the place where they lived at the time of the interview. Most of them perceived a greater chance of further living there. Nevertheless, they rated personal space and privacy less favorable than the living arrangement. As these participants were recruited from a geographic location at Kowloon central region that consisted of the middle to lower social class. These clients mainly resided in the

public housing estates, which were rental units developed by the Hong Kong Housing Society for the low-income families. Space was usually limited in these public housing estates, therefore personal space and privacy was less favourable. Participants were satisfied with the living arrangement although the standard of living was not high. It might be due to their restricted income, that they could not afford to choose another place of residence. Therefore they were satisfied with what they had already got. Another reason might be the value placed on living with family members among these participants, as previously mentioned.

Financial situation

From QOLI, the least satisfying domain was finance. This result was comparable to the findings of previous studies (Lehman, 1988; Lehman et al., 1993; Sullivan et al., 1991) that poor finances were common in the persistently mentally ill population. The majority of participants in this study also had the lowest ratings of satisfaction with the amount of money for entertainment, the amount of money they got and how comfortable they were financially. It was consistent with the objective QOL indicators that these clients were largely unemployed and lived below the poverty line. Therefore, most of them required financial support from CSSA and family. CSSA is a means-tested social security system in Hong Kong. As stated by the United Nations Human Rights Committee (2001), "the purpose of CSSA is to raise the income of a single person or a family to a level, relevant to the conditions in Hong Kong, at which they can meet essential needs such as food, rent and clothing" (p.59). However, the participants in this study reported the lowest satisfactory rating of finances. They could not afford any

entertainment or social life which restraint their rehabilitation and reintegration into the community. It was doubtful whether the rates of assistance paid through the CSSA scheme provide for a decent standard of living for its recipients. The Government has to review the level and scope of the financial assistance schemes regularly to ensure that they keep pace with the inflation rate and meet the changing needs of recipients. The Government can provide subsidy to low-income family to relieve their financial burden in caring of the clients. Consequently, better QOL of the clients could be ensured by reduction of poverty.

Mental status and QOL

In this study, the total BPRS scores, and severity of positive and negative symptom were found negatively related to the participants' ratings of satisfaction in all life domains. Participants with a poorer mental state would perceive a poor QOL. Specifically, total BPRS score of the participants in this study was significantly related to the frequency of social activity, employment status, and satisfaction with daily activities and social relationships. Relationships were stronger in negative symptoms. This finding suggested that mental state was negatively correlated with QOL of schizophrenic clients and the negative symptoms have greater impact. The results were consistent with previous studies (Corrigan & Buican, 1995; Dickerson, Boronow, & Ringel, 1996; Lehman, 1988; Meltzer et al., 1990; Packer et al., 1997; Sullivan et al., 1992). The relatively fewer correlations of positive symptoms and QOL was possibly related to the fact that the participants in this study were clinically stable and consequently had relatively low levels of positive symptoms. New atypical

antipsychotics such as Clozapine, Risperidone and Olanzapine were found to be able to improve the negative symptoms of schizophrenia, such as social withdrawal, blunted emotion and apathy. These had been increasingly being prescribed in replacement of the old generation neuroleptics.

Previous study found that there was a negative correlation between the number of previous hospitalizations and QOL (Meltzer et al., 1990). It indicated the deleterious effect of hospitalization on QOL. Results in this study showed that with increasing number of previous psychiatric hospitalizations, satisfaction with privacy, family interaction, personal safety and security, physical environment, use of transport, life enjoyment and meaningfulness of life would decrease.

In order to reduce the deterioration of functioning and progression of symptoms in the persistent and enduring course of schizophrenia, it seemed worthwhile to support programmes on early intervention. Most early intervention programmes emphasized the reduction of obstacles that keep clients and their families from seeking help. Existing strategies that have been implemented in Hong Kong include community psychiatric outreach services that aims at enhancing early identification of individuals at risk and provide treatment to them as earliest as possible. It also aims at easier access to service and to induce the clients an optimistic view about their outcome and willingness to engage in treatment. Health education programmes to public about mental illness were also provided. However, these early intervention programmes have just been started recently for less than six months. The 24-hour hotline psychiatric consultation and advisory services have just been established in 3 centres in Hong Kong. The outcomes of these programmes have yet to be determined.

Service utilization and QOL

In this study, participants who had received CPNS and were attendants at DH reported more satisfaction with their QOL. DH and CPNS recipients were more satisfied in ways of spending leisure, life enjoyment, social relationships, social support and family interaction. Some participants who received CPNS were dissatisfied with their having to depend on medication and treatment. In general, service users appear to have better QOL. It might be due to the fact that CPNS was mostly referred for helping those clients with a greater need for close and long-term monitoring in their mental condition and functioning.

The main objective of DH and CPNS is to provide continuity of care for mentally ill clients in the community. These services also enable a continuity of care across hospital and community. CPN can reach out to the clients and their families and provide the help that they need. The scope of service of CPNS includes planning and implementing nursing intervention, health education, rehabilitation, early detection of mental illness and crisis intervention. Furthermore, CPN can offer intensive skills training on promoting their work and social life. Through intensive contact and monitoring of clients, it was found that the clients had been better supported for community living (Chan et al, 1999). It is hoped that CPNS can ultimately prevent the clients from rehospitalization and also with their services, the clients' QOL can be improved.

The results of the study suggested that the CPN and DH services could help clients maintaining in the community and have better QOL. CPNS and DH gave clients continuous support and close monitoring of mental status and skills training. Clients

who received these services reported particularly better family and social relationships. It might reflect that the skills training such as social skills and communication skills, could contribute to greater confidence and satisfaction of the service users in their family and social relationships. However, this study found that a great majority of the participants did not receive services from DH or CPNS. It might be related to the inadequacy of services. It appears that expansion of CPNS and DH is imperative so that more intensive rehabilitation could be provided to enhance QOL of the clients with persistent mental illness in the community.

Predictors of QOL

In this study, mental status and employment were found to be the strongest predictors of QOL. Clients who are employed would have better perceived QOL. It was supported by the findings of Skantze et al (1992) that those in employment showed a significantly better QOL. It could be explained by the increased amount of money earned and an increased in self-confidence, self-esteem as well as psychological of well-being. The improved financial security and independent community living when being engaged in work has impact on psychological well-being too. Social well-being could be improved as well, as lack of money was identified as one of the reasons for their not being able to participate in social activities and entertainment. Arns and Linney (1983) also maintained that work had a therapeutic effect on the self-concepts and life satisfaction of persons with severe and persistent mental illness. Besides, individuals in employment reported increased self-esteem and better social skills when they had jobs.

However, most of the persistently mentally ill clients were unemployed. As mentioned earlier, stigmatization might be a major factor that limits the employment prospects of people with mentally illness. Beyond stigma, there were other issues that might negatively affect their success in securing and maintaining employment. For example, impairment in cognitive, perceptual, affective, and interpersonal abilities could directly impact social and vocational functioning, resulting in poor work habits, low vocational aspirations, poor job-finding and job retention skills, and overall poor work histories (Brieff, 1994). Besides, the relapsing course of mental illness might concern the employers, who would worry about the clients' reliability and productivity and therefore, unwilling to recruit the mentally ill clients. Another reason given by Mintz, Mintz, and Phipps (1992) for the reduced vocational functioning and work ability in schizophrenic clients was the adverse side-effects of psychotropic medications. There was also inequity in opportunities for employment among people with mental illness. Many jobs would not recruit those people with histories, or even family history of mental illness. That meant the mentally ill clients had many difficulties in finding gainful employment. It might be the reason for the large proportion of participants being engaged in sheltered workshops and unskilled occupation that their paid was significantly low.

In view of the large number of unemployed participants, it is apparent that vocational support for mentally ill clients in Hong Kong is inadequate. Vocational rehabilitation and supported employment needs further strengthening so as to help these clients to enter into the workforce. Sheltered workshops and DH provide extensive skills training interventions to develop their working skills before competitive job placement. It can facilitate clients to gradually transit to competitive employment and achieve more

satisfactory and better-paying work in the future. Additional effort has to be made to foster equal opportunity for employment of these clients. Besides, the society has to improve their acceptance towards mental clients in the community, to provide opportunities and expand resources for employing them. The clients' QOL would be enhanced if their problem of unemployment could be solved.

In this study, the number of previous psychiatric hospitalizations was found as having a strong predictive value in the social well-being domain, but not with other domains in the WHOQOL scale. It reflects that psychosocial rehabilitation programmes to target at improving social functioning, including the capacity to enjoy interpersonal relationships and meet social expectations among those clients with multiple hospitalizations are necessary for maximizing the QOL.

Schizophrenia is a prolonged and disabling illness. It interferes with their work, leisure, social relationships activities of daily living and functioning. From this study, it was apparent that the care of mentally ill was not just a medical problem, but also social problems such as unemployment, poverty, lack of meaningful activities in daily life and social support. These problems were modifiable on top of treating the disease by controlling the positive symptoms with psychotropic medications alone. In view of the wide scope of problems the mentally ill clients with persistent illness have encountered in the community, a multidisciplinary approach and well-coordinated services and interventions are essential for better serve these clients.

Objective indicators and subjective perception of QOL

Findings of this study showed that responses from the participants in the subjective indicators of QOL in both the Lehman's and WHOQOL's scale were consistent. It added support to the conclusion of previous studies that the mentally ill clients were able to share their own perspectives of their QOL. It also added weight on the subjective element in evaluating one's QOL as well as the need for incorporating clients' perspectives when providing services to them. The life domains included in the study clearly identified areas that the participants were satisfied and dissatisfied. It provided better insight into the current life situation and experiences of the schizophrenic clients with persistent illness in the local community. It could facilitate the planning of care in meeting the clients' needs to promote their QOL. When speculating information given on the objective indicators of QOL and functioning with each life domains, however, the clients tended to give a high rating in their subjective QOL despite their adverse objective life circumstances. It might reflect the possibility that these clients had lowered their expectation or standard of life. The other reasons might be due to the detrimental effects of their mental illness, such as negative symptoms. Consequential to the persistent illness despite long-term treatment, the mentally ill clients would probably lose the interest or motivation to improve their life circumstances. Therefore, the overall ratings of subjective satisfaction with QOL were high among the participants in this study. While addressing that QOL is a subjective matter, objective components of life condition cannot be totally ignored. It is important and necessary to include both objective and subjective QOL indicators in conducting QOL studies. The conceptual framework of using both indicators in this study is supported.

Summary

This chapter discussed the findings of the study with support from the literatures. The results lent support from previous studies. Findings showed that the participants, who had suffered from persistent schizophrenia and lived in the community, had poor QOL in many aspects of their life especially the daily activities and functioning, social relationships, work and finances. The participants needed assistance in these areas to enhance their QOL.

In this study, the female, middle-aged and unemployed participants had poorer QOL. Besides, participants with less frequent family and social interactions had poorer perception of their QOL. Participants who had not received CPNS or not attended DH reported poorer perception of QOL in the use of leisure time, family and social relationships. In addition, a majority of participants were unemployed and lived below the poverty line. Economical factors were important, Participants who received less financial support perceived their QOL as less favourable. Moreover, participants who experienced more hospitalizations had a poorer perception of their QOL. These findings helped to target interventions and services to the schizophrenic clients with persistent illness, who had poorer QOL in the community.

In this study, mental state and employment status was found to be predictors of QOL. Besides, the number of previous psychiatric hospitalizations was another predictor found for the social domain of QOL. All these factors need to be addressed to maximize QOL of the clients. The results and discussion on the findings raise some important implications for health care policy, nursing practice and future research. They will be discussed in the following chapter.

CHAPTER SIX

CONCLUSION AND IMPLICATIONS

Introduction

This study examined the QOL of schizophrenic clients with persistent illness in the community. Chapter four discussed the findings of the study. This chapter will present the summary of the study. Implications of the study to health care policy, to nursing practice and to future research will be suggested in the next sections. Finally, the limitations of this study will also be addressed.

Summary of the study

This study provided information on the QOL perceived by schizophrenic outpatients with persistent illness in Hong Kong community. Structured face-to-face interviews were conducted on 176 outpatient attendants at a psychiatric OPD by using four instruments to collect data. They were the BPRS, WHOQOL-BREF-HK, the Lehman QOLI (short version) and the demographic data sheet. Relationships between the perceived QOL and sociodemographic factors that included gender, age, educational level, marital status, employment status as well as clinical factors, which included mental state, number of previous psychiatric hospitalizations, years on onset of mental illness and the utilization of CPNS and DH were examined. It aimed to better understand the current life circumstances and satisfaction of these clients.

Participants were mostly 26-35 years old, single, living with family and had educated up to secondary level. They generally had poor QOL when compared with the general population in Hong Kong. Findings showed that the participants were most satisfied with family relationships and least satisfied with financial situation. Female, middle-aged and unemployed participants had poorer QOL. Besides, participants with less frequent family and social interactions and were not recipients of DH and CPNS, had poorer perception of QOL. Specifically, participants who had not received CPNS or not attended DH reported poorer perception of QOL in the use of leisure time, family and social relationships. This study showed that participants were disadvantaged in a number of life domains such as work, finances, daily activities and leisure, health and social relationships. Their lives were somewhat restricted, lack of social or leisure activities.

In this study, mental state and employment status was found to be predictors of QOL. Besides, the number of previous psychiatric hospitalizations was another predictor found for the social domain of QOL. All these factors needed to be addressed to maximize QOL of the clients.

The findings informed the current health care practice in terms of prioritizing resource allocation to those identified areas that the clients were mostly dissatisfied with and policy development in the care of persistently mentally ill clients in Hong Kong. Furthermore, the study gave direction for nursing practice to enhance the QOL of these clients.

Implications to health care policy

Results in this study revealed that mental status, repeated hospitalization, unemployment, financial difficulties, dissatisfactory social and interpersonal relationships, and lack of meaningful daily activities lowered clients' QOL. Employment rates for these schizophrenic clients were significantly lower than for the general population. Most participants were in poverty. The findings provided an explicit recognition of the social disadvantages of the persistently mentally ill clients in the community.

The findings of this study can provide direction for the improvement of services both at hospital level and community level for these clients. At hospital level, resources have to be put in discharge planning. Comprehensive discharge planning can be worked out with the clients to better prepare them for successful community living. With the foreseeable problems that the clients may encounter in the community, appropriate interventions can be provided to solve the problems. For example, it was identified that clients with persistent mental illness had deficits in social relationships. Therefore, social skill training can be incorporated in their rehabilitation plan, or referrals to community and voluntary agencies for social needs. Supervision and support to attend DH, social clubs or rehabilitation centres have to be provided. Health care professionals need to be knowledgeable about their clients' needs and the range of community resources available in meeting these needs. At community level, community sectors and psychiatric services can collaborate and coordinate their efforts in mobilizing resources and supplementing more opportunities for these clients. With an array of social and environmental supports, such as maximizing social networks in the community,

financial support, opportunity for employment, clients QOL can be enhanced.

Mental health services have to be provided by actively reaching out to those people who are in need. Probably, there are still individuals who have never been engaged in service in spite of their need for it. More resources have to be put in outreach service to be able to identify and engage these individuals, such as those with poor mental status, poor insight of their illness and poor QOL. The outreach team can provide comprehensive assessment, better support, detect early symptoms or relapses and instituting timely and appropriate treatment and intervention to the mentally ill clients in the community. Early identification of at risk individuals can be made. Referrals to appropriate agencies for help can be rendered as promptly as possible. The community outreach services help to engage and maintain the mentally ill clients, who have difficulty in accessing or accepting service. It offers an alternative for these clients. More intensive outreach service can be rendered to those with non-compliance with medication so that a close and intensive monitoring of clients' mental state was possible. It can better maintain the care and support to the clients and minimize the chance of rehospitalization. Crisis intervention or early intervention service with multidisciplinary team approach has also shown to reduce the need for hospitalization (Minghella, Ford, Freeman, McGlynn, & O'Halloran, 1998). A multidisciplinary team allows for a variety of approaches and interventions in helping clients. In addition, 24-hour hotline service with multidisciplinary team approach has to be further developed to better serve the whole population in Hong Kong. If more centres with professionals provided such service to the public, an easier accessible service and more comprehensive information could be provided to those in need.

Those CPNS recipients were found to be more satisfied with their social relationships, family relationships and leisure. They also provide continuous contact with clients so that close monitoring of clients' mental status is feasible. These outreach and discharge support for the mentally ill clients in the community has to be strengthened and expanded by increasing the number of community psychiatric teams and employing additional outreach community workers such as CPN to increase the visits and frequency of contacts with these clients. At present in Hong Kong, there are only about 150 CPNs serving the whole Hong Kong community and the nurse to client ratio is 1:50. This ratio is far too high for intensive monitoring and care for clients in the community. It is apparent that resources need to be put in expanding the CPN services.

This study identified that the majority of participants reported dissatisfaction with their ways of spending leisure time and social activity. Those participants who were attending DH had better perception of their daily activities, social support and family relationships. Functions of DH could include provision of intensive training on social skills for the clients and assist them in engaging in work and leisure, comprehensive psychoeducation on mental illness and its treatment for better compliance. Some of the findings of previous research (Browne et al., 1996) demonstrated that intensive psychoeducative rehabilitation programmes had a significant effect on improving clients' ability to live in the community and to increase their QOL. They also provide them with meaningful leisure activities and chances to develop interpersonal skills. Ultimately, the clients can improve their social adjustment capacities. The clients will be more satisfied with social functioning and reduce social isolation. Therefore, developing or establishing more DH or social centres where tailored active rehabilitation programmes are provided can be beneficial to the clients in the community.

One of the main findings in this study showed unemployment was pervasive among the participants and it led to diminished QOL. Vocational rehabilitation has increasing importance as part of the array of services available for persons with schizophrenia. These services include vocational guidance, vocational assessment, vocational training and selective placement. Work not only provides financial remuneration but is also a normalizing experience, allowing individuals to participate in society, and may promote self-esteem and QOL (Arns & Linney, 1983). Vocational support such as supported employment or selective placement is an important aspect for expansion to provide more opportunities and resources for recruiting these clients. In addition to set up more sheltered workshops, where job skill training is provided to better prepare these clients for competitive and gainful employment in order to improve their indigence in community living. Besides, it encourages the clients to participate in society that may promote self-esteem and QOL.

Stigma and discrimination can be a great hindrance for the mentally ill clients' work or social integration. Negative attitudes towards mentally ill clients are still common in Hong Kong. Legislation on discrimination against mentally ill clients is a relatively new area even in Western countries where other equal opportunities laws have been in effect for a long time. In Hong Kong, the Disability Discrimination Ordinance (DDO) was enacted in August 1995 by the Government to give people with a disability the means to fight against discrimination, harassment and vilification. The non-employment related provisions of the DDO came into effect on September 20, 1996 and the remaining provisions were brought into operation on December 20, 1996. Though equal opportunity policy to protect the rights of the mentally ill clients has been in place in Hong Kong, mentally ill persons still cannot obtain equal opportunities in entering the

job market. It appears that the Government does not do its utmost to enforce the provision of equal opportunities in employment among the persons with mental illness. Beyond legislation, public education to enhance general public's knowledge of mental illness and its treatment may lead to a reduction in negative stereotyping. Therefore, strategies to broaden public's knowledge about mental illness and to mobilize the support and resources of the community members are needed. It is hoped to strengthen the public's acceptance towards clients with mental illness and to accord them their equal opportunities in the community.

Clients' mental state, which was found to be the most important predictors to QOL, suggested the importance of symptom control. Although medication is useful in controlling active psychotic symptoms of schizophrenia, long-term use of the psychotropic medication may produce disabling and distressing side effects. Because of the side effects, many clients do not comply with taking them. The Government has to invest money in newer-generation medication with less side-effects. It can help to ensure better drug compliance of the mentally ill clients and thus, minimize the chance of relapse and preventing complications of repeated hospitalizations. While medical treatment continues to play a major part, social rehabilitation is equally important and necessary in helping mentally ill clients. Social rehabilitation aims at developing the physical, mental and social capabilities of the mentally ill clients to the fullest possible extent, which their abilities permit. The ultimate objective is to help them reintegrate into the community, thus leading to a better QOL.

Training of health care professionals such as nurses to work in the community is essential. Resources have to be put in to prepare health care professionals for community care. By equipping with knowledge and skills in early detection, psychopharmacology, psychosocial therapy, supportive counseling, family therapy and psychiatric rehabilitation, the health care professionals can work better with clients. It would strengthen their capacity and competence in delivering interventions effectively in the care of the persistently mentally ill clients in the community.

Implications to nursing practice

Psychiatric nurses are the health care professionals who have the most frequent contact with clients. They are familiar with the clients and their needs. Findings of this study can provide direction for nursing practice both at hospital level and community level for these clients. At hospital level, nurses may be able to target and plan ahead of appropriate nursing interventions to achieve the ultimate goal of improving the QOL for the clients. For example, carers of the mentally ill are mainly their immediate family members and they do live together in a nuclear family in Hong Kong. In this study, family relationship was found to have a positive impact on perception of QOL of the participants. It highlighted the importance of family in supporting a satisfactory living in the community among the participants. Therefore, family relationship has to be maintained. Clients' families have to be involved in the treatment plan to enhance family relationships. More information and support has to be provided to the families in caring clients. Psychological counseling, advice and constant contacts are necessary to maintain the family's goodwill of caring for a mentally ill relative. Care for the carers is

an extension of rehabilitation services so that family members are supported thoroughly. Support groups, such as parents/relative groups need to be developed and strengthened. In these groups, members can freely ventilate their feelings and experience, share problems and find solutions together, thus minimizing family burden in the long-term care of the persistently mentally ill clients. It can improve clients' QOL.

In addition, nurses can understand those variables that will affect clients' QOL to establish appropriate interventions. The areas that were reported by the participants as less satisfactory were finance, social relationships, daily activity and functioning. These were areas in which the clients need to develop support or strengths, and areas that were of most concern to the clients. This information can be incorporated in the discharge planning so that more beneficial and appropriate nursing care can be devised in a proactive manner. When planning rehabilitation programmes for the clients, nurses can pay more attention in improving their interpersonal relationships and social skills through appropriate encouragement and training. Therefore, psychosocial skills training that teach clients verbal and nonverbal interpersonal skills can be provided. Various sorts of community facilitates can be introduced so that they can refer to after discharge.

In consistent with some previous studies that specific demographic characteristics and clinical variables affect one's QOL, this study found that lower QOL was more likely related to females, younger to middle-aged, unemployed schizophrenic clients who had more frequent psychiatric hospitalizations and a poorer mental state. Special attention has to be made to those female, middle-aged schizophrenic clients to maximize the QOL in the community. The females in this study suffered more severe positive symptoms as compared with the males. Women's health can be closely related to their

disadvantaged positions in the family and in the workforce. The isolation and socially undervalued positions of housewives leads to poor self-image and mental health problems. The double burden of paid work and family responsibility is a major cause of stress in women. Women's role as household carers, their dual roles of housewives and employee, and their lack of resources are all factors contributing to women's unsatisfactory physical and mental health (Leslie, 1992; Verbrugge, 1986). In addition, there are many health issues that disproportionately affect or are unique to women e.g. breast cancer, menopause and other gynecological problems (Rodin & Ickovics, 1990). These all affects their QOL. The findings of this study revealed the importance of helping female schizophrenic clients to cope with their life stress, to meet their specific needs and to reduce symptom distress. Counseling, health education, advocate for their rights and mobilization of resources can be rendered. Other members of the family have to be educated on the need for them to play an equal part in family life and to shoulder their share of the household chores.

In realizing the multiple needs of the persistently mentally ill clients in the community, a case management approach has to be adopted. Case management, especially when provided by interdisciplinary teams, can be the vehicle for making efficacious treatments accessible to mentally ill clients. CPN can be case managers as being equipped with clinical knowledge and competencies, to help in promoting QOL of the clients by ensuring continuity of care, coordinating health and social resources to provide intensive monitoring and support to the clients in the community. Because CPNs have more opportunities for maintaining contact and work closely with the mentally ill clients and their family caregivers in the community, they are in a better position to build collaborative relationships, not only with clients but also with families

and other caregivers. These relationships enable CPNs to enlist a richer source of information that is useful in determining the clients' and caregivers' needs and to broaden the spectrum of treatment strategies. They can act as a consultation-liaison agent for getting the clients' multiple needs met from various service organizations, conducting comprehensive assessments, undertaking and coordinating timely interventions. In addition, close monitoring and supervision of the clients in the community to minimize the latter's chance of relapse and the rehospitalization is one of the mission of CPN service. To alleviate the vicious cycles of relapse and rehospitalization, interventions on relapse prevention are needed. These interventions may include teaching clients and family members about schizophrenia, its treatment, the side-effects of psychotropic medications, how to recognize early signs of a psychotic relapse, as well as reporting any changes in symptoms promptly. When such signs were reported, more frequent visits will be paid by the CPN. CPN will then liaise with the psychiatrist in helping clients and families to resolve crisis or for an adjustment of medications if indicated. It will probably reduce the need of hospitalization for these clients and avoid institutionalization. It was found that the care management programme in the community greatly reduced the need to hospitalization of the mentally ill clients (Chan et al., 1999). Therefore, the case management model in the delivery of care can be adopted in the CPN service to provide more intensive and comprehensive care for the benefits of their clients.

CPNs can make effective specific psychosocial interventions with clients and their families to further strengthen family relationships, to decrease the stress within the family and also the rate of relapse. Appropriate family intervention programmes e.g. psychoeducation and support groups can be implemented by collaborating with relatives

who cared for the clients. Families act as a source of information about the patient for the care team. They may help to ensure compliance with medication, monitor symptoms and side effects and assist in recovery and rehabilitation. To fulfill these roles to their maximum benefit, it is essential that families be provided with information about the illness and its treatment. CPN can provide family education and support to the family members to reduce their expressions of anger and guilt, hostility and criticism, maintain reasonable expectations for client performance, improve family communication skills to maintain therapeutic relationship with the clients.

CPNs can also offer their effort in community education that improves the knowledge towards mental illness and help to reduce the stigma towards clients with mental illness. Currently, hotline service is provided to the public by some of the CPNS centres, and it is mostly available during office hours only. Only three of these centres also provide 24-hour hotline psychiatric advisory and consultation services. More 24-hour hotline services have to be established in order to offer prompt advice, counseling and consultation service to those at need. Special publicity programmes have to be enhanced. Examples of the publicity programmes include forums and leaflets targeting the mass media; roadshows, radio programmes and educational talks targeting the general public; and mental health education talks in schools, particularly early in the school curriculum for mental health promotion among children and adolescents.

Implications for future research

This study demonstrated the usefulness and effectiveness of subjective QOL measures in identifying the needs of the participants in the specific life domains. It can be used as an outcome indicator in evaluating health care services or nursing interventions as well as a part of ongoing assessment of the rehabilitation programmes for the mentally ill clients. Findings of this study reflected that stabilized outpatients with persistent schizophrenia were able to response accurately for themselves in a valid and reliable manner about their current life circumstances and rate their subjective life satisfaction. Further studies can adopt this self-reporting approach as a way to generate information from clients with mental illness. Clients' self perception has to be included in future researches on their QOL.

This study illustrated the usefulness and sensitivity of the QOLI and WHOQOL in assessing the perception and experiences of the participants. This study laid the foundation for further research. Future studies can use similar instrument in measuring QOL. Comparison could be made across studies. QOL is influenced by multiple factors in the environment. Some of these factors are modifiable. Results of this study demonstrated the impact of employment status and mental state on QOL of the participants. Additional research on the mechanisms of the influence of employment status and mental status on QOL is needed. For example, it is believed that employment status will affect one's self-esteem or functioning, studies on the effects of self-esteem and functioning on QOL may add knowledge to QOL study. It will also strengthen the findings and lend added support to the development of health care interventions that target these areas to enhance the QOL of the persistently mentally ill clients in the

community. Some literature documented the interrelations between QOL concepts and social support (Rosenfield, 1992). Social support is not measured in this study. The study of these factors in relation to QOL may add more information to the understanding of QOL.

The transition to community care has increased awareness of the extent and importance of family caregiving in the maintenance of mentally ill clients at home who otherwise would be institutionalised. This study found that family relationships were treasured among the participants, who also reported better QOL. If home care is to become a viable alternative to institutional care, an exploration of the QOL of family caregivers for studying the impact of community care on family caregivers is necessary. Therefore, the QOL issues of family caregivers are another crucial areas for future research.

In the future, a qualitative approach of data collection can be adopted to explore the clients' views of their QOL by collecting rich narratives. For example, Norman and Parker (1990) conducted a study on the perceptions and experiences of a group of long-stay psychiatric clients as they moved from a large institution to a community hostel by means of unstructured interviews. Interview provides opportunity to clarify the participant's responses and allow in-depth exploration of knowledge. The unstructured interview allows the participants to describe the actual experiences or response without a preset boundary. This information will be more meaningful and better understanding of the QOL of persistently mentally ill clients can be gained.

Limitations of the study

This study used structured interview to collect data. One of the disadvantages of structured interview is the restriction in depth and breadth of data, which may be collected. The sample for this study was composed of outpatients who were attending follow-up treatment at one of the psychiatric outpatient departments in Hong Kong. Clients from other outpatient departments may come from different socioeconomic background that affect their perception on QOL. Further studies can be conducted in different outpatient departments. In this study, only those who were interesting in the study and consented to participate were included, therefore, the findings of the study represented only the views of this particular group of clients. The clients who refused to participate in the study or those with very severe positive and negative symptoms may have a distinctly different perception on their QOL. Further studies are needed to increase the generalizability of the findings.

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Appendix 1 : Brief Psychiatric Rating Scale (BPRS)

0=not present 1=very mild 2=mild 3=moderate 4=mod. Severe 5=severe 6=extremely severe

1. somatic concern : preoccpation with physical health, fear of physical illness, hypochondriacs ☐
2. anxiety : worry, fear, overconcern for present and future ☐
3. emotional withdrawal : lack of spontaneous interaction, isolation, deficiency in relating to others ☐
4. conceptual disorganization : thought processes confused, disconnected, disorganized, disrupted ☐
5. guilt feelings : self-blame, shame, remorse for past behaviour ☐
6. tension : physical and motor manifestations or nervousness, overactivation, tension ☐
7. mannerisms and posturing : peculiar, bizarre, unnatural motor behaviour ☐
8. grandiosity : exaggerated self-opinion, arrogance, conviction of unusual power or abilities ☐
9. depressed mood : sorrow, sadness, despondency, pessimism ☐
10. hostility : animosity, contempt, belligerence, disdain for others ☐
11. suspiciousness : mistrust, belief others harbor malicious or discriminatory intent ☐
12. hallucinatory behaviour : perceptions without normal external stimulus correspondence hallucinatory behaviour : perceptions without normal external stimulus correspondence ☐
13. motor retardation : slowed, weakened movements or speech, reduced body tone ☐
14. uncooperativeness : resistance, guardedness, rejection of authority ☐
15. unusual thought content : unusual, odd, strange, bizarre thought content ☐
16. blunted affected : reduced emotional tone, agitation, increased reactivity ☐
17. elation / euphoria : elation, euphoria, ecstatic states, heightened emotional tone, agitation, increased reactivity ☐
18. psychomotor excitement : increased amount and rate of speech and movement ☐

Appendix 2 : Manual of Scoring for Brief Psychiatric Rating Scale

(BPRS)

Manual for Brief Psychiatric Rating Scale (BPRS)

Ref. Overall J.E. & Gorham, D.R. (1962). Psychological Reports.
Version: Kolakowska, T. Oxford University, 1976

1. Somatic concern (r)
Degree of concern over present bodily health. Rate the degree to which physical health is perceived as a problem by the patient, whether complaints have a realistic basis or not.

0	Not present	
1	Very mild	Minor complaints when asked directly about physical health
2	Mild	Spontaneous minor complaints: overconcern for physical health
3	Moderate	Preoccupation with bodily health (hypochondriacal attitude): physical symptoms as a main complaint and first topics
4	Moderately severe	Concentrated on bodily symptoms: continuously complaining and asking for help
5	Severe	Hypochondriacal delusions, usually with bizarre complains and marked anxiety, preoccupied with these delusions to the exclusion of many other matters
6	Extremely severe	Hypochondriacal delusions, pervasive, with expectation of imminent death/severe disability

2. Anxiety (r)
Worry, fear or over-concern for present or future. Rate on the basis of verbal report of patient's own subjective experiences. Do not infer anxiety from physical signs (assessed in item 6, Tension).

0	Not present	
1	Very mild	Reported on questions only: expressed as mild and infrequent feeling of uneasiness, concern
2	Mild	Mild and transient nervousness, tension: tendency to overconcern for minor matters and/or mild anxiety related to specific situations
3	Moderate	Feeling nervous, tense, insecure, upset most of the time and/or attacks of acute anxiety, related to specific situations
4	Moderately severe	Feeling 'shaken', 'scared' most of the time and/or frequent attacks of acute anxiety
5	Severe	Feeling continuously frightened/terrified by the expected loss/abandonment/disability, to the exclusion of other mental contents
6	Extremely severe	State of panic

3. Emotional withdrawal (o)
Deficiency in relating to the interviewer and to the interview situation. Rate only the degree to which the patient gives the impression of failing to be in emotional contact with other people during the interview.

0	Not present	
1	Very mild	Cool/reserved
2	Mild	Disinterested, bored, spontaneous
3	Moderate	Formal, voice flat, little change in facial expression
4	Moderately severe	Answers some questions only, avoids eye-contact, emotional reactions absent or inappropriate
5	Severe	Mute or verbal answers irrelevant but some response in facial expression gestures
6	Extremely severe	No response elicited

4. Conceptual disorganisation (o)

Degree to which thought processes are confused, disconnected or disorganised. Rate on the basis of interaction of the verbal products of the patients, do not rate on the basis of patient's subjective impression of his own level of functioning.

0	Not present	
1	Very mild	Subjective only or some ambiguity/distractibility/circumstantially
2	Mild	Subjective only or some ambiguity/distractibility/circumstantially but in a degree impairing the interview
3	Moderate	Some irrelevance, loosening of association, neologisms, blocking, loosing the thread, some answers difficult to understand
4	Moderately severe	Some irrelevance, loosening of association, neologisms, blocking, loosing the thread, some answers difficult to understand but in a degree making communication difficult
5	Severe	Only isolated fragments of speech understandable
6	Extremely severe	Speech impossible to follow (word salad, incoherence)

5. Guilt feeling (r)

Over-concern or remorse for past behaviour. Rate on the basis of the patient's subjective experiences of guilt as evidenced by verbal report with appropriate affect, do no infer guilt feelings from depression, anxiety or neurotic defences.

0	Not present	
1	Very mild	On questions only, some minor regrets over past behaviour, no elaboration
2	Mild	Regrets over past behaviour, tendency to self-blaming in trivial matters
3	Moderate	Remorse and self-blaming ruminations
4	Moderately severe	Pervasive guilt feeling with self-depreciation and self-blaming for everything that has gone wrong
5	Severe	Delusions of guilt (sin, crime) and/or punishment
6	Extremely severe	Pervasive delusions of guilt and/or punishment, dominating thought content and behaviour

6. Tension (o)

Physical and motor manifestations of tension, 'nervousness' and heightened activation level. Tension should be rated solely on the basis of physical signs and motor behaviour and not on the basis of subjective experiences of tension reported by the patient.

0	Not present	
1	Very mild	Over-alert, tense posture, occasional blushing, occasional unnecessary small movements
2	Mild	Over-alert, tense posture, occasional blushing, occasional unnecessary small movements
3	Moderate	Some autonomous signs of anxiety, frequent unnecessary small movements, restlessness
4	Moderately severe	Autonomic signs of anxiety: tremor, restlessness with changing position and getting up, wringing hands, occasional pacing
5	Severe	Motor agitation with pacing, rocking, banging head or tense immobility with increased muscle tones, some contact still possible
6	Extremely severe	Motor agitation with pacing, rocking, banging head or tense immobility with increased muscle tones, uncontrollable, contact impossible

7. Mannerisms and posturing (o)

Unusual, inappropriate and bizarre motor behaviour, independent of origin, the type of motor behaviour which causes certain mental patients to stand out in a crowd of normal people. Rate only abnormality of movement, do no rate simple heightened motor activity here. Side effects are included.

0	Not present	
1	Very mild	Some eccentricity in posture, occasional unusual/stereotypical movements
2	Mild	Small unusual/stereotypical movements frequent (looking at hands, scratching head, etc)
3	Moderate	Persistent small stereotypical movements, occasional gross stereotypical behaviour (rocking, saluting, magic movements) grimaces
4	Moderately severe	Grimaces, stereotypical movements, gross stereotypical and/or bizarre postures most of the time
5	Severe	Continuous stereotypical movements/ grimaces/and/or bizarre postures. Could be interrupted
6	Extremely severe	Continuous stereotypical unusual motor behaviour uncontrollable

8. Grandiosity (r)

Exaggerated self-opinion, conviction of unusual ability or power. Rate only on the basis or patient's statements about himself or self to others, not on the basis of his demeanour on the interview situation.

0	Not present	
1	Very mild	Exaggerated self-opinion
2	Mild	Feeling superior, important, talented, with some superior abilities, boastful, expecting privileged
3	Moderate	Convinced of his exceptional abilities, special responsibilities, important role, great achievements
4	Moderately severe	Delusional conviction of power, supernatural abilities, mission
5	Severe	Delusions of grandeur (being a great leader, president, etc), determine most of the behaviour
6	Extremely severe	Total preoccupation with florid delusions of grandeur and omnipotence

9. Depressive mood (r and o)

Despondency in mood, sadness, hopelessness. Rate only degree of despondency, do not rate on the basis of inferences depression based upon general retardation and somatic complains.

0	Not present	
1	Very mild	Feeling of sadness transient, not any spontaneous complaints, no sign of depression in appearance
2	Mild	Complaints of lack of energy, feeling gloomy, worried, bored, sad
3	Moderate	Looked depressed, feels miserable, helpless, expresses pessimism and other depressive contents, crying, vague/occasional suicidal ideas, functioning impaired
4	Moderately severe	Physical signs of depression usually with some retardation or agitation, feelings of despair, hopelessness, depressive contents dominate, suicidal ideas
5	Severe	Pervasive severe depression with marked physical signs of depression, depressive delusions, preoccupation with death/suicide
6	Extremely severe	Depressive stupor or agitation, florid depressive delusion, self-destructive behaviour

10. Hostility (r)

Animosity, contempt, belligerence, disdain for other people outside the interview situation. Rate solely on the basis of verbal report of feelings and actions of the patient toward others, do not infer hostility from neurotic defences, anxiety nor somatic complaints. (Rate attitude toward interviewer under uncooperativeness).

0	Not present	
1	Very mild	Excessive criticism of other people
2	Mild	Dislike, fault-finding, resentment, irritability
3	Moderate	Marked irritability, hostile attitude, outburst of temper with accusations, insults, verbal threats
4	Moderately severe	Frequent generalised verbal aggression, occasional physical aggression
5	Severe	Permanent tense and hostile attitude, with generalised verbal aggression, frequent physical aggression and destructive behaviour
6	Extremely severe	Indiscriminative continuos verbal and physical aggression (shouting insults and threats, damaging furniture, striking at approaching persons)

11. Suspiciousness (r)

Belief (delusional or otherwise) that others have now, or have had in the past, malicious or discriminatory intent toward the patient. On the basis of verbal report, rate only those suspicious which are currently held whether they concern past or present circumstances.

0	Not present	
1	Very mild	Self-consciousness, lack of confidence in others
2	Mild	Vague ideas of reference, tends to suspect other people of laughing at him, acting against him in trivial matters, etc. Response to reassurance
3	Moderate	Paranoid attitude, Ideas of reference and/or persecution, vague, soft and unsystematized
4	Moderately severe	Active and affectively loaded paranoid delusions, some systematization or Delusional mood
5	Severe	Florid, actively elaborated paranoid Delusional system or intense Delusional mood
6	Extremely severe	All-embracing system of florid paranoid delusions or overwhelming Delusional mood

12. Hallucinatory behaviour (r and o)

Perceptions without normal external stimulus correspondence. Rate only those experiences which are reported to have occurred within the last week and which are described as distinctly different from the thought and imagery processes of normal people.

0	Not present	
1	Very mild	Hallucinatory quality of the reported experience doubtful, hypnagogic hallucinations
2	Mild	Isolated elementary hallucinatory experiences (lights, hearing own name)
3	Moderate	Verbal or fully developed hallucinatory from other senses definitely present but infrequent, not affecting behaviour, some insight
4	Moderately severe	Hallucinations frequent, the patient reacts to them, no insight
5	Severe	Hallucinations persistent, intense, determine patient's behaviour
6	Extremely severe	Massive hallucinations, hallucinatory state (as in acute delirium or acute hallucinosis), patient totally absorbed in hallucinatory experience, no contact possible

13. Motor retardation (o)
Reduction in energy level evidenced in slowed movements. Rate on the basis of observed behaviour of the patient only. Do not rate on the basis of patient's subjective impression of own energy level.

0	Not present	
1	Very mild	Lack of spontaneity/slight hesitance in speech or movements
2	Mild	As '1' with pauses in speech, answers brief and delayed, but in full sentences
3	Moderate	Movements slowed down, speech spontaneous, voice low, answers delayed, in brief or incomplete
4	Moderately severe	Little change in facial expression, movements slow, hesitant, incomplete speech, single words, in whisper, on questions only
5	Severe	Semi-stupor
6	Extremely severe	Stupor

14. Uncooperativeness (o)
Evidence of resistance, unfriendliness, resentment and lack of readiness to cooperate with interviewer. Rate only on the basis of the patient's attitude and responses to the interviewer and the interview situation. Do not rate on basis of reported resentment or uncooperativeness outside the interview situation.

0	Not present	
1	Very mild	Overformat in talk and behaviour
2	Mild	Reluctant to answer some questions, shows some annoyance with the interview, answers brief
3	Moderate	Objects to some questions, answers brief or vague and evasive, clearly annoyed with the interview, full interview difficult
4	Moderately severe	Hostile attitude to the interviewer, refuses to answer some questions, tries to leave the office, full interview impossible
5	Severe	Refuses to be examined, to enter the office, answers irrelevant or mute or verbally abusive, interview impossible but contact established
6	Extremely severe	Interview impossible, refuses to enter/stay in the office, no answers to questions/commands, or continuously aggressive

15. Unusual thought content (r)
Unusual, odd, strange or bizarre thought content. Rate here the degree of unusualness, not the degree of disorganisation of thought processes. Distinguished from item 11, suspiciousness.

0	Not present	
1	Very mild	Isolated overvalued ideas of unusual beliefs, infrequent obsessional thoughts
2	Mild	Overvalued ideas, unusual beliefs, eccentric theories, obsessional thoughts
3	Moderate	Preoccupied with bizarre theories, beliefs, inventions, some delusional misinterpretation, residual delusions
4	Moderately severe	Preoccupied with bizarre theories and/or delusions limits other activities and dominates thought content
5	Severe	Bizarre theories and/or delusions determine most of the thought content and behaviour
6	Extremely severe	All embracing bizarre theories or overwhelming delusions determine entire behaviour and thought content

16. Blunted or inappropriate affect (r and o)
Reduced emotional tone, lack of normal feeling or involvement. Expressed emotion inappropriately. Rate to the situation or thought content.

0	Not present	
1	Very mild	Emotional reactions lack in spontaneity
2	Mild	Emotional reactions scares and rigid
3	Moderate	Apathetic, affect flat, little interest in family, friends, environment, own future, if delusional - delusions still 'affectively loaded', inappropriate grinning
4	Moderately severe	Apathy and withdrawal, indifferent towards his own situation, delusions/hallucinations have no affective colouring, incongruity of affect
5	Severe	Profound apathy and withdrawal, no interests, expression of affect absent or inappropriate, self-neglect in appearance and behaviour
6	Extremely severe	Total apathy and indifference with self-neglect in basic needs, affect - if expressed - grossly inappropriate

17. Elation/euphoria (r and o)
Elation, euphoria, ecstatic states. heightened emotional tone, agitation, increased reactivity.

0	Not present	
1	Very mild	Increased sense of well-being
2	Mild	Feel happy and full of energy, overoptimistic, over-talkative, activity increased
3	Moderate	Feel 'high' and excited, unusually happy, restless, irritable, speech under pressure, distractible, over active but purposeful activity impaired
4	Moderately severe	Alternating from joy to anger, speech loud and fast, associations (by sound, rhyme, etc), overactivity
5	Severe	Ecstatic or alternating from joy to anger, excitement, continuously talking, shouting, singing, flight of ideas, meaningful communication very limited, in constant movement
6	Extremely severe	As '5' to an extreme degree, no contact possible

18. Psychomotor excitement (o)
Increased amount and rate of speech and movement. ratings based upon observation.

0	Not present	
1	Very mild	Overtalkative
2	Mild	Overtalkative and overactive
3	Moderate	Speech fast and loud, restlessness, movements rapid, purposeful activity impaired
4	Moderately severe	Continuous flow of speech/frequent outbursts of shouting, in constant movement (pacing, dancing), activity disorganised
5	Severe	Continuous flow or disorganised speech (word salad, flight of ideas, shouting threats, obscenities isolated words) motor excitement, usually of destructive character
6	Extremely severe	Continuous uncontrollable chaotic motor and verbal excitement leading to exhaustion (as in catatonic excitement, delirium, acute mania, etc.)

Appendix 3a : The Hong Kong WHOQOL-BREF (WHOQOL-BREF-HK)

This questionnaire asks about your perception of your quality of life. Please answer all the items in the questionnaire. These questions are concerning about your life in the past one month. Please answer the answer with the alternatives given according to your own standard and expectation. Please select the one that most appropriate for you among the alternatives. Please read each item and select your answer to each item, then put a (✓) in the box next to your answer.

1. How do you rate your quality of life?
   ☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

2. Are you satisfied with your health?
   ☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

3. Do you feel pain and discomfort hinder you from completing what you have to do?
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

4. Do you depend on medicinal substances and medical aid in your daily life?
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

5. Do you enjoy life?
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

6. Do you feel life meaningful?
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

7. Can you concentrate?
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

8. In your daily life, how do you rate your safety? (For example : political safety, personal safety, environmental safety)
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

9. Is the physical environment healthy? (For example : pollution, climate, noise, scene, nuclear plant)
   ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

10. Do you have enough energy to cope with daily life?
    ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

11. Do you accept your own bodily image and appearance?
    ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

12. Do you have enough financial resources?
    ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

13. Do you have opportunities for acquiring new information and skills?
    ☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

14. Do you have participation and opportunities for recreation or leisure activities?
☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

15. How is your mobility?
☐ Very unable ☐ Unable ☐ Neutral ☐ Able ☐ Very able

16. How satisfied are you in your sleep and rest?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

17. How satisfied are you in your ability in carrying out activities of daily living?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

18. How satisfied are you in your work capacity?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

19. Generally speaking, how satisfied are you with your self-esteem?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

20. How satisfied are you with your personal relationships?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

21. How satisfied are you with your sexual activity?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

22. How satisfied are you with your social support?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

23. How satisfied are you with your home environment?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

24. How satisfied are you with the accessibility and quality of health and social care?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

25. How satisfied are you with transport?
☐ Extremely dissatisfactory ☐ Dissatisfactory ☐ Not satisfactory nor dissatisfactory ☐ Satisfactory ☐ Extremely dissatisfactory

26. Do you have negative feelings?
☐ Never ☐ Little ☐ Sometimes ☐ Often ☐ Always

27. Do you feel being respected and accepted?
☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

28. Do you find it easy to get the food that you want?
☐ Not at all ☐ A bit ☐ A certain extent ☐ Much ☐ Very much

Appendix 3b : Hong Kong Chinese Version World Health Organization Quality of Life Measure Abbreviated version (WHOQOL-BREF-HK)

世界衛生組織生活質素問卷

這問卷問及你對自己生活質素的感受。請回答內頁所有問題。

我們所關注的是你在過去一個月內的生活。請以你自己個人的標準及期望作選擇的準則。

如果你不能肯定那一個答案最合適，請選擇你認爲較接近的一個。

請你細讀內頁每一條問題，評估你的感受，然後「✓」上最適合的答案。

1. 你怎樣評估你的生活質素？
   ☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

2. 你滿意自己的健康狀況嗎？
   ☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

3. 你覺得痛楚及不適阻礙你處理需要做的事情嗎？
   ☐ 沒有阻礙 ☐ 少許阻礙 ☐ 某程度阻礙 ☐ 很大程度阻礙 ☐ 極阻礙

4. 你需要藉著醫療的幫助去應付日常生活嗎？
   ☐ 不需要 ☐ 少許需要 ☐ 某程度需要 ☐ 很大程度需要 ☐ 極需要

5. 你享受生活嗎？
   ☐ 不享受 ☐ 少許享受 ☐ 某程度享受 ☐ 很大程度享受 ☐ 極享受

6. 你覺得自己的生活有意義嗎？
   ☐ 沒有 ☐ 少許 ☐ 某程度有 ☐ 很大程度有 ☐ 極有

7. 你可以集中精神嗎？
   ☐ 不可以 ☐ 少許可以 ☐ 某程度可以 ☐ 很大程度可以 ☐ 極可以

8. 在日常生活中，你感到安全嗎？(例如:政治安全、人身安全、環境上的安全。)
   ☐ 不安全 ☐ 少許安全 ☐ 某程度安全 ☐ 很大程度安全 ☐ 極安全

9. 你身處的自然環境健康嗎？(例如:污染、氣侯、噪音、景色、核電安全。)
   ☐ 不健康 ☐ 少許健康 ☐ 某程度健康 ☐ 很大程度健康 ☐ 極健康

10. 你能有充沛的精力去應付日常生活嗎？
    ☐ 不能夠 ☐ 少許能夠 ☐ 某程度能夠 ☐ 很能夠 ☐ 完全能夠

11. 你能接受自己的外貌嗎？
    ☐ 不能夠 ☐ 少許能夠 ☐ 某程度能夠 ☐ 很能夠 ☐ 完全能夠

12. 你能有足夠的金錢應付需要嗎？
    ☐ 不能夠 ☐ 少許能夠 ☐ 某程度能夠 ☐ 很能夠 ☐ 完全能夠

13. 你能得到你日常生活所的資訊嗎？
☐ 不能夠 ☐ 少許能夠 ☐ 某程度能夠 ☐ 很能夠 ☐ 完全能夠

14. 你能有機會參與消閒活動嗎？
☐ 不能夠 ☐ 少許能夠 ☐ 某程度能夠 ☐ 很能夠 ☐ 完全能夠

15. 你能到處走動嗎？
☐ 極不能夠 ☐ 不能夠 ☐ 沒有能夠或不能夠 ☐ 很能夠 ☐ 極能夠

16. 你滿意自己的睡眠狀況嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

17. 你滿意自己從事日常生活事情的能力嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

18. 你滿意自己的工作能力嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

19. 整體而言，你滿意自己嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

20. 你滿意自己的人際關係嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

21. 你滿意自己的性生活嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

22. 你滿意從朋友得到的支持嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

23. 你滿意自己住所的情況嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

24. 你對醫療衛生服務的方便程度滿意嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

25. 你滿意自己使用的交通工具嗎？
☐ 極不滿意 ☐ 不滿意 ☐ 沒有滿意或不滿意 ☐ 很滿意 ☐ 極滿意

26. 你經常有消極的感受嗎？
☐ 從來沒有 ☐ 很少有 ☐ 有時有 ☐ 很多時有 ☐ 不停有

27. 你覺得別人接受你嗎？
☐ 不接受 ☐ 少許接受 ☐ 某程度接受 ☐ 很大程度接受 ☐ 極接受

28. 你容易食到你想食的食物嗎？
☐ 不容易 ☐ 少許容易 ☐ 某程度容易 ☐ 很大程度容易 ☐ 極容易

Appendix 4a : Lehman Quality of Life Interview -Short Version

I. General Life Satisfaction

1. How do you think about your present overall living status?

   If the best is 7 point, the worst is 1 point and average is 4 point, how will you grade yourself? How do you feel about your life in general? ☐

Living Situation

1. Where do you live now? _____
2. List in order the places you have lived during the past year _____
3. Where do you often live? _____
4. Have do live in the following places in the past year? ☐

   a. Street b. Inside an empty building c. Public sheltered homes d. church / temple

5. Is there any place where you live in for 5 days within 7 days? _____
6. If the full mark is 7, the worst is 1 and the average is 4, how will you grade yourself in the following situations?

   a. the living arrangement where you live ☐

   b. the privacy you have there ☐

   c. the prospect of staying on where you currently live ☐

III. Daily Activities and Functioning

1. Did you spend your time on the followings in the past week

   a. go for a walk ☐

   b. go shopping ☐

   c. dine out in restaurants ☐

   d. read books, newspapers or magazines ☐

   e. travel by cars, ferries, bus or Mass Transit Railway ☐

   f. spend your leisure time according to your hobbies ☐

   g. go to the park ☐

2. Overall speaking, do you think that you are a useful / functional person at home, society and work? Please kindly tell me. ☐

   a. very useful b. useful c. useless d. very useless

3. How do you feel about (Best : 7, Average : 4, Worst : 1)

   a. The way you spend your spare time ☐

   b. The chance you have to enjoy pleasant or beautiful things ☐

   c. The amount of fun you have ☐

   d. The amount of relaxation in your life ☐

IV. Family

The following questions are about your relationship with your family including any relatives with whom you live

1. In the past year, how often did you talk to a member of your family on the phone? ☐
   a. at least once a day
   b. at least once a week
   c. at least once a month
   d. less than once a month
   e. not at all
   f. no family (go to section E)
   g. no answer

2. In the past year, how often did you get together with a member of your family? ☐
   a. at least once a day
   b. at least once a week
   c. at least once a month
   d. less than once a month
   e. not at all
   f. no family (go to section E)
   g. no answer

3. How do you feel in the followings? (Best : 7, Average : 4, Worst : 1)
   a. How are you getting together with your family members? ☐
   b. Overall speaking, what is your relationship with your family? ☐

V. Social Relations

Now I am going to ask you questions about people who are not in your family

1. How often do you perform the following activities?

   a. at least once a week b. less than once in a month c. never

   About how often do you do the following?

   a. visit with someone who does not live with you ☐
   b. telephone someone who does not live with you ☐
   c. do something with another person that you planned ahead of time ☐
   d. spend time with your intimate friends (male / female) ☐

2. How do you feel in the following questions?

a. the things you do with other people ☐

b. the amount of time you spend with other people ☐

c. how you get along with other people in general ☐

VI. Finances

1. Did you have the following financial support in the past month?

A. earned income	☐	G. Sheltered workshop	☐
B. CSSA	☐	H. Unemployment allowance	☐
C. Disability / Old age allowance	☐	I. Profit from investment, savings	☐
D. Long-term subsidy	☐	J. House rent subsidy	☐
E. Single disability allowance	☐	K. Family assistance	☐
F. Charity fund	☐	L. Other sources (please specify)	☐

2. How much did you receive totally from all sources in the past month? _____

3. On the average, how much money did you have to spend, excluding money for housing and meals? _____

4. In the past year, did you have enough money to cover for the monthly expense for the following items?

A. Food	☐	D. Traffic expenses	☐
B. Clothing	☐	E. Social activities, recreation	☐
C. Housing	☐		

5. How satisfied are you with the following?

a. The amount of money you have? ☐

b. Are you having enough money to spend? ☐

c. How much can you spend on entertainment? How satisfied are you? ☐

VII. Work

1. Have you been working in the past year? ☐ Are you working now? ☐

2. Which type of job are you doing? _____

3. How many working hours per week? _____

4. How much do you earn from your job per hour, weekly or monthly? _____

5. How about your "job satisfaction"? (7: the best, 4:average, 1:the worst)

a. How satisfied are you with your present job? ☐

b. How satisfied with the working environment? ☐

c. How satisfied with the paid wages? ☐

VIII. Legal and safety aspects

1. How many times have you called the police in the past year? _____
2. Are you victim of the followings in the past year?
   a. Violent crime e.g. being robbed, raped or assaulted? ☐
   b. Non-violent crime e.g. being theft or cheated of your properties? ☐

3. How satisfied are you with the following questions?
   a. How safe are the streets nearby where you live? ☐
   b. Do you think that your home is safe? ☐
   c. Amount of protection against being robbed or attacked? ☐

IX. Health Status

1. In the past month, for the sake of health, do you
   a. reduce the time for work or entertainment? ☐
   b. reduce the things you have planned to finish ☐

2. About
   a. How will you grade for your health, in general ☐
   b. How will you grade for your physical condition ☐
   c. How will you grade for your emotional wellbeing ☐

For the last question, how do you think about your present overall living status?

How will you grade yourself? ☐

Best:7 Average:4 Worst:1

Appendix 4b : Chinese Translation of the Lehman QOL Interview

- Short Version

壹. 對生活狀況滿意的程度

1. 你覺得你現時整體的生活狀況點樣？
   如果 7 分是滿分〔最好〕，1 分是最差，4 分是中等，你會俾自己幾多分？ ☐

貳. 居住情況

1. 你目前住係什麼地方？_____
2. 過去一年，倒數上去，你住過什麼地方？_____
3. 邊一處是你經常住的地方？_____
4. 過去一年，有沒有住過以下的地方？☐
   a: 街邊 b: 無人住的建築物 c: 公家的庇護所 d: 教堂 / 廟宇
5. 你目前有沒有一處你七日當中，有五日住係個度的地方？_____
6. 如果 7 分是滿分，1 分是最差，4 分是中等，係以下的情況，你會比自己幾多分？
   Ⅰ. 現時居住的安排？ ☐
   Ⅱ. 你自己有的私人空間？ ☐
   Ⅲ. 繼續係個度住的成數 / 機會，有幾高？ ☐

參. 日常生活、功能方面

1. 我他傾下你日常的活動，試睇下你有沒有係過去一星期做以下的事情：
   A. 去散步？ ☐
   B. 出街買野？ ☐
   C. 出街飲茶或者食飯？ ☐
   D. 睇書或報紙、雜誌？ ☐
   E. 搭車、船、輕鐵？ ☐
   F. 按照你的嗜好去消磨時間？ ☐
   G. 做運動？ ☐
   H. 去公園坐？ ☐
2. 整體來講，你覺得自己係屋企、社會、同埋工作各方面，係唔係一個有用的人： ☐
   a.: 非常有用 b: 幾有用 c: 幾無用 d: 非常無用
3. 再來睇下以下的情況，你會俾自己幾多分？7 分係滿分，4 分係中等，1 分係最差
   Ⅰ. 你覺得係利用空閒時間方面值幾多分？ ☐
   Ⅱ. 你覺得你係享受美好的事物方面的機會有幾多分？ ☐
   Ⅲ. 你覺得你係做人的樂趣方面值幾多分？ ☐
   Ⅳ. 你覺得你係生活中擁有的娛樂消遣值幾多分？ ☐

肆. 家庭方面　跟著的問題是有關你同你家人的關係的：

1. 過去一年，你同家人通電話的次數有幾多次？ ☐
   a: 最少每日一次　b: 最少每星期一次　c: 最少每月一次 d: 超過一個月先至一次
   e:完全沒有通電話 f: 沒有家人 (轉答 E 部份)　g: 沒有答案
2. 過去一年，你同家人係埋一齊的次數有幾多次？ ☐
   a: 最少每日一次　b: 最少每星期一次　c: 最少每月一次　d: 超過一個月先至一次
   e: 完全沒有見面　f: 沒有家人 (轉答 E 部份)　g: 沒有答案

3. 你覺得係以下的問題，你會俾自己幾多分？7 分係滿分，4 分係中等，1 分係最差
   Ⅰ. 你同家人相處得好嗎？值幾多分？ ☐
   Ⅱ. 整體來講，你同家人關係值幾多分？ ☐

伍. 社交方面

依家我問你的問題，係有關你家人以外的人

1. 你有幾何做以下的事情呢？a: 每星期最少做一次　b: 超過一個月先至一次　c: 完全沒有
   Ⅰ. 同某人一起參觀、遊覽地方 ☐　　Ⅲ. 同某人一齊參加約好的節目 ☐
   Ⅱ. 打電話俾某人 ☐　　Ⅳ. 同你的親密朋友(男 / 女)去消遣 ☐

2. 睇下以下的事情，你會俾自己幾多分？ 7 分係滿分，4 分係中等，1 分係最差
   Ⅰ. 你同其他人一齊做的事情，你覺得值幾多分？ ☐
   Ⅱ. 你同其他人消遣的時間又值幾多分？ ☐
   Ⅲ. 你對於所見的朋友，有幾滿意？值幾多分？ ☐

陸. 財政狀況

1. 過去一個月，你有沒有以下的財政來源？
   A. 工作所得的薪金 ☐　　G.庇護工場、輔助工作資助 ☐
   B. 公援金 ☐　　H.失業金 ☐
   C. 傷殘金 / 高齡津貼 ☐　　I. 投資得益、儲蓄利息 ☐
   D. 長期補助金 ☐　　J. 房屋租金津貼 ☐
   E. 單人傷殘金 ☐　　K. 家人資助 ☐
   F. 慈善基金 ☐　　L. 其他 (請註明) ☐

2. 過去一個月，你在以上所有的來源，總共收到幾多錢？_____

3. 除了房租、三餐食物以外，你平均每月支出要幾多錢？_____

4. 過去一年，你是否有足夠金錢支付每個月以下的開支？
   A. 食物 ☐　　C. 房屋 ☐　　E. 社交活動、消遣等 ☐
   B. 衣著 ☐　　D. 交通費 ☐

5. 睇下以下的問題，你覺得有幾滿意？ 7 分係滿分，4 分係中等，1 分係最差
   A. 你所得的錢的數目？ ☐
   B. 你算唔算有足夠錢用？ ☐
   C. 你可以用係娛樂方面的錢有幾多？_____　　有幾滿意？☐

柒. 工作

1. 過去一年，你有無曾經工作過(做過野)？☐　　你現在有無工作？☐
2. 你現在做緊邊一類工作？_____
3. 你每星期做幾多個鐘頭？_____
4. 你每個鐘頭、每星期或每個月有幾多人工？ (約數) _____

5. 你對於「工作滿足感」方面，你會俾自己幾多分？ 7 分滿分，4 分中等，1 分最差
   A. 你對現時的工作有幾滿意？ ☐
   B. 工作的環境又有幾滿意？ ☐
   C. 你所得的工資有幾滿意？ ☐

捌. 有關法律及安全事項

1. 過去一年，你有幾多次報警察拘控？_____
2. 過去一年，你係唔係以下的受害人？
   A. 暴力罪案，例如被人打劫、強姦、襲擊？ ☐
   B. 非暴力罪案，例如被偷或騙去財物？ ☐
3. 睇下以下的問題，你覺得值幾多分？ 7 分係滿分，4 分係中等，1 分係最差
   A. 你覺得你所住的附近街道有幾安全呢？ ☐
   B. 你覺得你住緊的屋企安全嗎？ ☐
   C. 你覺得你得到幾多的保護，免受到打劫或被人襲擊呢？ ☐

玖. 健康狀況

1. 過去一個月，由於健康理由，你有無
   A. 減少工作或娛樂的時間？ ☐　　B. 減少了你預算做完的事情 (減少生產量)？ ☐

2. 對於（7 分係滿分，4 分係中等，1 分係最差 ）
   A. 你自己的「整體健康」，你會俾自己幾多分？ ☐
   B. 你自己的「身體健康」，又俾幾多分？ ☐
   C. 你的「心理健康」，又得幾多分？ ☐

拾. 最後一個問題，你覺得你現時整體的生活狀況點樣？你會俾自己幾多分？ ☐

7 分係滿分，4 分係是中等，1 分係是最差

Appendix 5 : Application for permission to pretest the Chinese Version of Lehman QOLI in CPNS

To : Ms. Lai W.M.(Psy.)
Ward I1/CPNS, XX Hospital

From : Iu Wai-Yu R.N.(Psy.)
Ward I1, XX Hospital
Date : 8th March, 1999

Dear Ms. Lai,

Request for Permission to Conduct a Research Pilot Work in CPNS

I am, part-time Master of Philosophy in Nursing year I student of the Chinese University of Hong Kong, undertaking a nursing research project as partial fulfillment of the course under the supervision of Professor Sally Chan.

The title of the proposed research is the quality of life of the chronic schizophrenic patients in the community. The request for Ethical Approval of the research project has been already submitted to the Ethical Committee of XXX Hospital.

The pilot work aims to pretest one of the translated measurement tools --- the Lehman Quality of Life Interview, that will be administered to the schizophrenic outpatients who are follow-up attendants at the Outpatient Department in the Department of Psychiatry of XXX Hospital. The subjects in this pilot study will be the clients in your service. I will be the sole researcher. The procedure hopes to establish the test-retest reliability of the translated version of the questionnaire. It will also provide me with further experience when conducting the actual study.

Although the clients in this pilot will not be included in the main study, the anonymity of the subjects and confidentiality of data will also be respected. Besides, the recruitment of participants will be strictly on a voluntary basis.

Your kind permission for me to conduct the pilot study in CPNS as well as your valuable support and assistance will be much appreciated.

Yours faithfully,

Iu Wai-Yu

Appendix 6a : Consent for clients to participate in the pre-test of the QOLI (English version)

Dear participant,

I am, part-time Master of Philosophy in Nursing year I student of the Chinese University of Hong Kong, undertaking a nursing research project as partial fulfillment of the course.

The study aims to investigate the quality of life of the psychiatric outpatients, who reside in the community. It hopes to collect information for the improvement of the nursing care and rehabilitation services for the psychiatric outpatients.

Structured face-to-face interviews will be used to collect data. Questionnaires will be administered to the schizophrenic outpatients who are follow-up attendants at the Outpatient Department in the Department of Psychiatry of XXX Hospital. Although you will not be included in the actual study, your valuable participation and opinion will help to improve the content of the questionnaire. Therefore, I sincerely hope to invite your participation in the pre-test of the questionnaire. I also wish to reassure you that all your information will be kept strictly confidential and all the data will be erased after the study.

If you have any queries, please feel free to contact me. (Tel. No. 27626258)

I am grateful for your time in participating in this pretest. Thank you.

Iu Wai Yu
Ward I1 RN (PSY)
12th March, 1999

Consent for participation in the pretest of Lehman QOLI

Here, I would like to confirm my consent to participate in this face-to-face structured interview about quality of life conducted by Ms. Iu Wai Yu. I understand that the data and information will be collected from me, but anonymity and confidentiality was assured. Besides, I have the right to withdraw or refuse to participate in the study or raise any questions about the study.

Signature : _____ Date : _____

Appendix 6b： Consent for clients to participate in the pre-test of the QOLI (Chinese version)

各位：

本人是香港中文大學護理學系護理哲學碩士兼讀課程一年級學生，就課程要求，需要進行一項護理研究。

本人希望探討非住院精神病人在社區中的生活質素，希望這些資料可有助於改善對精神病人或精神病康復者的照顧、護理和服務計劃。是項研究的對象將會是 **XXX** 精神科的門診病人，並將以面談及問卷調查作爲研究的方法，雖然你們將不會被包括入研究的對象，但是你們所給予的意見和資料將可改善問卷的內容，故本人希望你們可以協助完成這問卷，而且閣下的意見將會絕對保密，調查完畢後將被毀滅，敬請放心。

如對調查及問卷內容有任何疑問，歡迎隨時作出查詢 (電話：27626258)。

對於你們能撥出寶貴的時間來協助，本人感激萬分，謝謝。

姚懷如上
【I1 病房註冊護士】
一九九九年三月十二日

接受問卷調查同意書

本人同意接受姚懷如以面談方式，詢問有關本人生活質素的問題。

本人明白面談資料及過程將被記錄，以備參考，但是會以不記名方式記錄，而且所有資料將絕對保密，本人更可保留隨時撤回同意接受問卷調查的權利及詢問一切有關問題。

簽署:_____ 日期:_____

Appendix 7a: Demographic data sheet (English version)

1. Sex ? ☐ male ☐ female

2. Age ? ☐<25 ☐26-35 ☐36-45 ☐46-55 ☐56-65 ☐>66

3. Educational level ? ☐ illiterate ☐ primary ☐ secondary ☐ tertiary ☐ university

4. Marital status ? ☐ single ☐ married/cohabitated ☐ divorced/separated ☐widow/widower

5. Did you attend day hospitals in the past three months ?

6. Did you receive CPNS in the past three months ?

7. Do you need to take regular oral medication ?

8. Do you need to receive regular depot injection ?

9. Number of previous psychiatric hospitalizations ?

10 Months apart since last hospitalization ?

11. Year of onset of mental illness ?

Appendix 7b: Demographic data sheet (Chinese version)

個人資料

1. 你的性別？ □ 男 □女

2. 你的年齡？ □<25 □26-35 □36-45 □46-55
□56-65 □>66

3. 你的教育程度？ □不識字 □小學 □中學 □預科 □大專/大學

4. 你的婚姻狀況？ □單身 □已婚/同居 □離婚/分居 □喪偶

5. 你有否接受日間醫院服務？

6. 你有否接受精神科社康護理服務？

7. 你是否需要定時口服藥物治療？

8. 你是否需要定時注射藥物治療？

9. 你曾經入住精神科醫院的次數？

10 你最近一次入院距離現在多久了？

11. 那一年開始有精神病 ？

Appendix 8 : Study Plan

Task	Date of completion
Application for use of the measurement instruments	February, 1999
Application for University Ethical Committee's approval	March, 1999
Application for permission from the Department of Psychiatry of the study hospital	March, 1999
Application for ethical approval from the study hospital	March, 1999
Pilot study	June, 1999
Analyze results from pilot study	July, 1999
Data collection	September, 2000
Data Analysis	October, 2000
Organize data	December, 2000
Thesis Writing	25th June, 2001
Submission of the thesis	30th June, 2001

Appendix 9a : Invitation letter with consent form to participants of the study (English version)

Dear Participants,

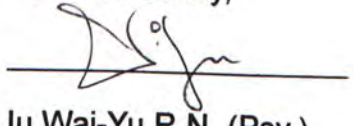
I am part-time student studying Master of Philosophy in Nursing in the Chinese University of Hong Kong. I intend to conduct a nursing research project and submit it as the partial fulfillment of the requirements for the Degree.

I am conducting a study on the quality of life of schizophrenic outpatients in the community. I also hope to explore information for the improvement in service provision for the psychiatric patients in Hong Kong.

The research project will target at the outpatients who are attending follow-up at the outpatient department of the Department of Psychiatry in XXX Hospital. I would be most grateful if you could participate in this study. The format will be a face-to-face interview conducted by me. You will be asked to give your opinion on your quality of life. There are no right or wrong answers. I am interested in your views only. Any information that you give will be anonymous and confidential. You will not be identified in any way. The interview takes about 40 minutes to complete. If you have any comments or concerns about any question or the purpose of it, you can ask at any time or refuse to answer the questions. All information given by you will be erased after the completion of the research.

If you consent to take part in the interview, I would be grateful if you could complete the written consent form as well. If you require further information, please feel free to contact me. (Tel. No. 27626258)

Yours sincerely,



Iu Wai-Yu R.N. (Psy.)

Ms. Iu has given me all details of the study. Here, I would like to confirm my consent to participate in this study.

Signature : _____

Date : _____

Appendix 9b : Invitation letter with consent form to participants of the study (Chinese version)

各位：

本人是香港中文大學護理學系護理哲學碩士兼讀課程一年級學生，就課程要求，需要進行一項護理研究。本人希望探討非住院精神病人的生活質素，希望這些資料可有助於改善對精神病人或精神病康復者的照顧、護理和服務計劃。

是項研究的對象將會是 **XXX** 精神科的門診病人，作爲這研究工作的一部分，本人希望透過面談及問卷調查方式， 以加深對這課題的瞭解，故此本人希望你們可以協助完成這問卷和給予你們的寶貴意見，完成時間約需四十分鐘。你們所給予的意見和資料將會絕對保密，而且在研究工作完畢後將被毀滅，並且將不會對閣下的護理服務有任何影響，敬請放心。如同意者請在隨函之同意書上簽署。如對調查及問卷內容有任何疑問，歡迎隨時作出查詢 (電話：27626258)。

對於你們能撥出寶貴的時間來協助，本人感激萬分，謝謝。

姚懷如上 (I1 病房註冊護士)

一九九九年七月一日

接受問卷調查同意書

本人同意接受姚懷如以面談方式，詢問有關本人生活質素的問題。

本人明白面談資料及過程將被記錄，以備參考，但是會以不記名方式記錄，而且所有資料將絕對保密，本人更可保留隨時撤回同意接受問卷調查的權利及詢問一切有關問題。

簽署:_____ 日期:_____

Appendix 10 : Application for the use of the Chinese translation of the Lehman QOL Interview - Short Version

Iu Wai Yu R.N. (Psy)
3rd March, 1999.

Dr. Cheung Hung Kin C.O.S. Team 4,
Castle Peak Hospital.

Dear Dr. Cheung,

Thank you very much indeed for your valuable opinions on my research on QOL. I deeply appreciate your generosity and support in offering me the references. It gives me much helpful insight and information to further refine my research project. I also have great interest to assess the different kinds of residential placement in the community as a factor contributing to the subjective experience and overall QOL of our samples.

As you have been so kind to let me have your Chinese translation of the Lehman QOL Interview Short Version, I am sure that you will allow me to adopt your instrument in my project. I am writing to respectfully apply for your kind approval.

I have already invited some of my colleagues to do the back translation of your Chinese version of the Lehman QOL Interview into English to examine the consistency in the meaning of the Chinese version with the original English version. I am going to pilot test the instrument with a small sample of the schizophrenic outpatients who are follow-up attendants at the Outpatient Department in the Department of Psychiatry of XXX Hospital.

Once again, thank you so much for your help.

Yours sincerely,

Iu Wai Yu

Appendix 11 : Approval letter for using the WHOQOL-BREF-HK

伊利沙伯醫院
QUEEN ELIZABETH HOSPITAL

九龍加士居道30號 30 Gascoigne Road, Kowloon, Hong Kong.

Project Team on the Development of the HK Chinese version WHOQOL
Hong Kong Authority

c/o Department of Occupational Therapy, P1, Queen Elizabeth Hospital
Phone: (852) 29586166, (852) 29586173, Fax: (852) 29586719, e-mail: kfleung@ha.org.hk

Dear Ms. Iu,

Thank you for your notification of using WHOQOL-BREF in your study. We are very keen to provide any further assistance as needed. You are welcome to contact us at any time.

We have prepared two SPSS syntax files for BREF scoring, one for general scorning and one for pre and post test study design, for calculating the facet and domain scores from raw data. Please inform us if you need one for your data analysis, we will arrange to send a copy to you.

It is much appreciate if you can send us the demographic data and the raw scores of WHOQOL-BREF after you have finished your study. Those data are used for WHO global data analysis.

Yours Sincerely,

(Ms. Codi Wong)
for Mr. K.F. Leung
Project Manager,
Project Team on Development of
Chinese version WHOQOL scale
Hong Kong Hospital Authority

Appendix 12 : Approval letter for using the Chinese version of the QOLI

青 山 醫 院
CASTLE PEAK HOSPITAL
15 Tsing Chung Koon Road, Tuen Mun
屯 門 青 松 觀 路 15 號
Telephone Operator: 2456 6200 Facsimile: 2455 9330
電 話 總 機 : 2456 6200 傳 真 : 2455 9330

Date : 9th March 1999

Miss IU Wai Yu, R.N. (Psy)
Ward I 1, Department of Psychiatry
Kowloon Hospital

Dear Miss Iu,

Your letter dated 3/3/99 refers. You would indeed be **welcome to use our Chinese translation of the Lehman QOL Interview Short Version.**

We are most interested in hearing that you will be doing a **back translation of that Chinese version into English**. We would be happy if you can further improve upon that translation.

Yours sincerely,

(Dr. H.K. Cheung)
Chief of Service, Team 4
Castle Peak Hospital

HKC/gw
(file:IU-QOL.doc)

Appendix 13 : Approval letter from the Faculty of Medicine, the Chinese University of Hong Kong

THE CHINESE UNIVERSITY OF HONG KONG

FACULTY OF MEDICINE
SHATIN. NT. HONG KONG

香港中文大學
醫學院
香港新界沙田

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SERVING THE COMMUNITY THROUGH QUALITY EDUCATION, CARING PRACTICE AND ADVANCEMENT OF HEALTH SCIENCES

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Our Ref: FM/C/13 – CRE9259

Your Ref:

30 September 1999

Ms Wai Yu Iu
Dept. of Nursing
CUHK

Dear Ms Iu,

I write to inform you that ethical approval has been given for you to engage in the project named below:

Project Title:	**"Quality of Life of Chronic Schizophrenic Outpatients in the Chinese Community" (ref. No. CRE-9259)**
Investigator(s):	**Ms Wai Yu Iu, MPhil. Student, Dept. of Nursing, CUHK**
Supervisor(s):	**Ms Sally WC Chan**
Location of Study:	**Kowloon Hospital**
Duration:	**8 months**

Conditions by Clinical Research Ethics Committee (if any): **Nil**

It will be much appreciated if the completion of the project will be reported to the Committee in due course.

Yours sincerely,

Andrew Chan
Secretary
Clinical Research Ethics Committee

Appendix 14 : Application for ethical approval of research from the study hospital

To: Hospital Chief Executive,
XXX Hospital

From: Iu Wai-Yu R.N.(Psy.)
Ward I1, K.H.
Date: 8th March, 1999.

Dear Dr. Choy,

Application for Approval of Research Study

I am, part-time Master of Philosophy in Nursing Year I student of the Chinese University of Hong Kong, undertaking a nursing research project under the supervision of Professor Sally Chan.

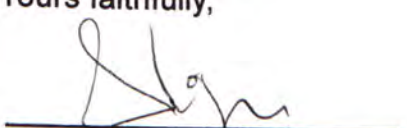
I would like to seek your kind approval and ethical review from the Research Committee of XXX Hospital for studying the quality of life of the chronic schizophrenic patients in the community.

The study aims to explore information for the improvement and future development of nursing services towards this group of mental patients. The research proposal is attached for your persual.

The anonymity of the subjects and confidentiality of data will be respected. There is no potential risks or harm to the participants and disruption to hospital routine will be kept to minimum. The study will take about six months to complete.

Your approval in permitting me to carry out the study will be much appreciated.

Yours faithfully,



Iu Wai-Yu

c.c. Chairperson of Ethics Committee (Nursing), XXX Hospital
Chief of Service, Department of Psychiatry, XXX Hospital
Department Operations Manager, Department of Psychiatry, XXX Hospital

Appendix 15 : Approval letter for research from the study hospital

MEMORANDUM

醫院管理局
HOSPITAL AUTHORITY

From : Hospital Chief Executive
Kowloon Hospital

To : Miss IU Wai-yu, RN (Psy)

Ref. : (113) in KH-1A/39 II

Tel. : 2195 4121

Fax. : 2760 7608

Date : 8 April 1999

Application for approval of Research Study

I refer to your letter dated 23.3.99 requesting permission to conduct a research in Kowloon Hospital.

I am glad to inform that approval has been granted for you to conduct the research. As a reference to our service, please let us have a copy of the findings.

Thank you for your attention.

(Miss Carmen YEUNG)
for Hospital Chief Executive
Kowloon Hospital

c.c. COS (Psy)
PMO (SD)
GM (N)